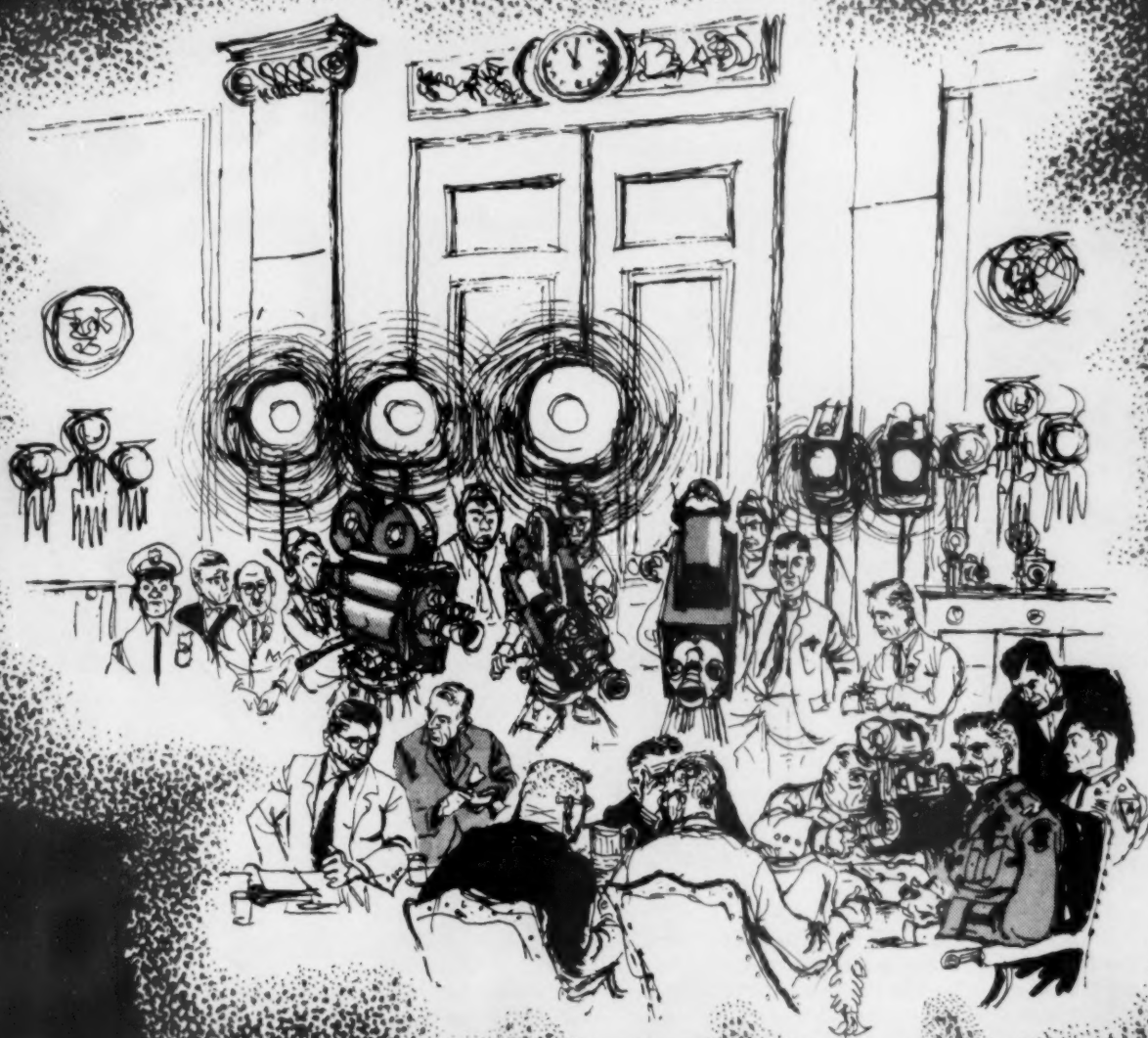


EXPLORER: The Army Comes Through

# ARMY

MARCH 1958

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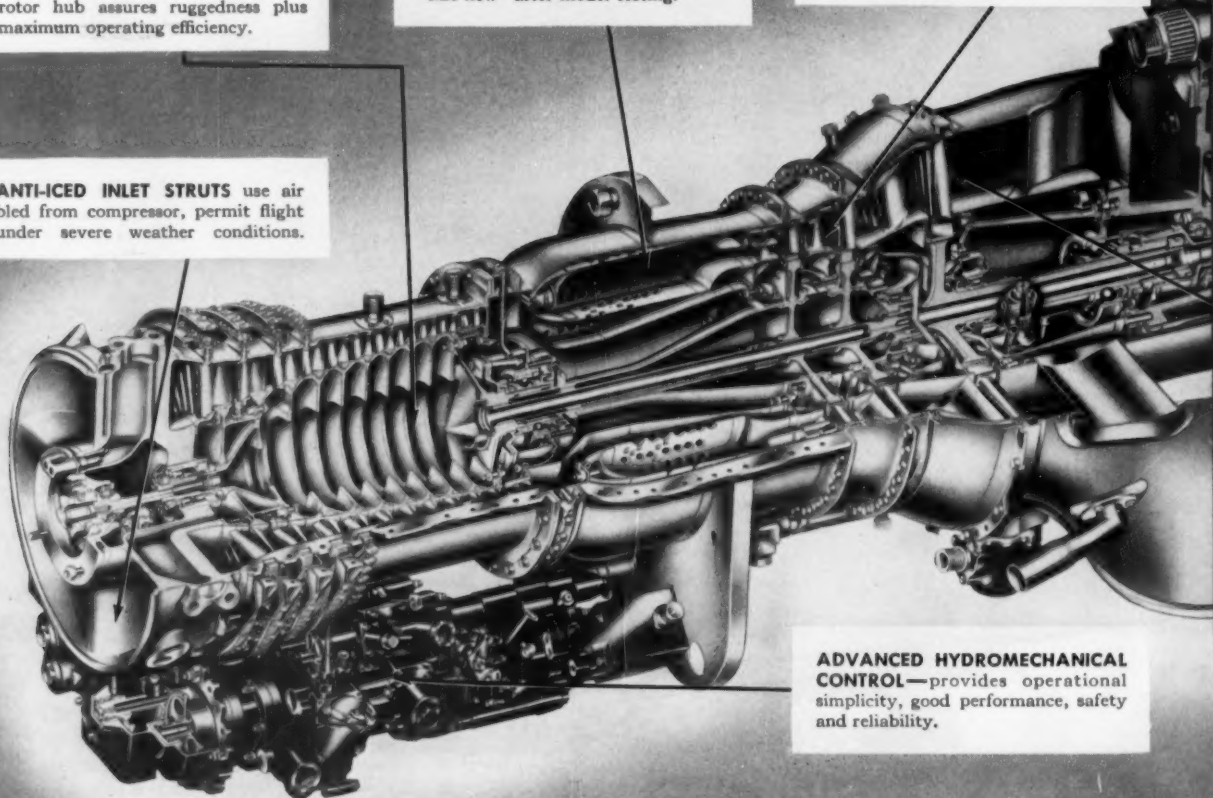
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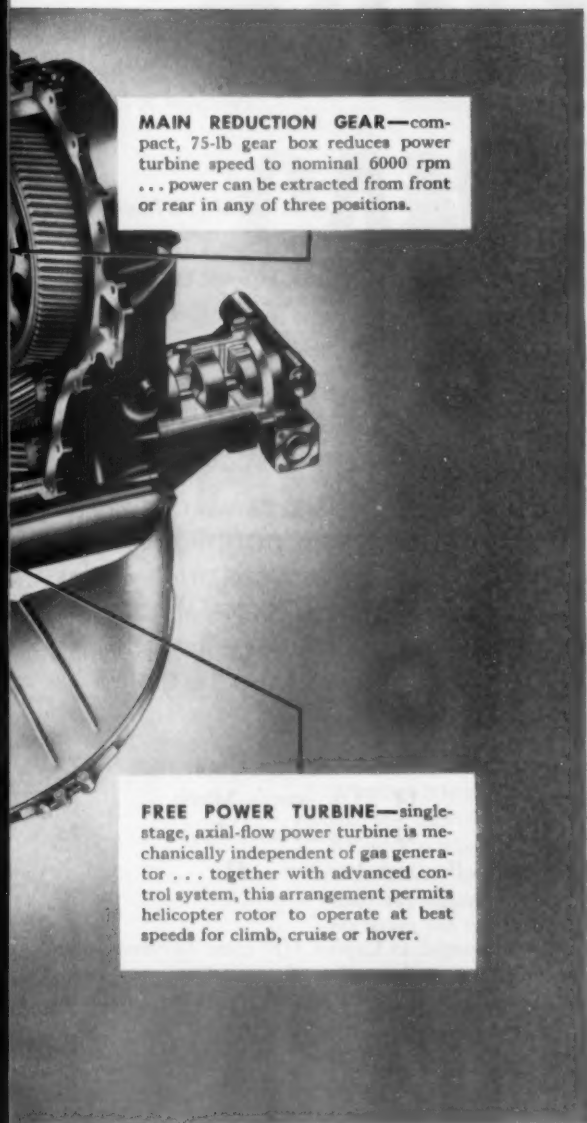


**T58 FLIGHT TEST PROGRAM** began in January 1957 in Sikorsky HSS-1 (left), was recently extended to Vertol H-21D (center) and will include the Kaman HU2K-1 (right). Comprehensive flight, rotor and cell tests have already proven the engine's performance, reliability, control stability and power-splitting ability.



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# ARMY

magazine of the **ASSOCIATION OF THE UNITED STATES ARMY**

Vol. 8

No. 8

March 1958

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Advance man's knowledge of warfare in the fields of strategy, tactics, logistics, operations, administration, weapons and weapons systems.

Advance man's knowledge and understanding of the soldier as an individual, as a member of a trained unit, and as a member of the whole Army; emphasizing leadership, esprit, loyalty, and a high sense of duty.

Disseminate knowledge of military history, especially articles that have application to current problems or foster tradition and create esprit.

Explain the important and vital role of the United States Army in the Nation's defense and show that the Army is alert to the challenges of new weapons, machines, and methods.

Advance the status of the soldier's profession.

*AUSA By Laws, Par. 13 Article II*

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## THE MONTH'S COVER

Artist Gill Walker journeyed to Capitol Hill come months ago to view a often-publicized spectacle: a Committee of Congress getting the facts about the state of the Nation's defenses from a military witness.

**ARMY** is published monthly by the Association of the United States Army. Publication date: 25th of preceding month. Publication, Editorial and Executive Offices: 1529 Eighteenth Street, N.W., Washington 6, D. C. Copyright©, 1958, by Association of the United States Army. Entered as Second Class Matter at Washington, D. C., additional entry at Richmond, Va., under the Act of March 3, 1879. Articles appearing in **ARMY** do not necessarily reflect the opinions of the officers, or members of the Council of Trustees of the Association of the U. S. Army, or the editors.

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membership in AUSA, and foreign subscriptions (all foreign subscribers \$1 per year additional for postage). For other rates write Circulation Manager, 1529 Eighteenth Street, N.W., Washington 6, D. C.

**ADVERTISING** information and rates available from the Advertising Director or any of our advertising representatives, who are:

New York office—516 Fifth Avenue, Murray Hill 2-5253.

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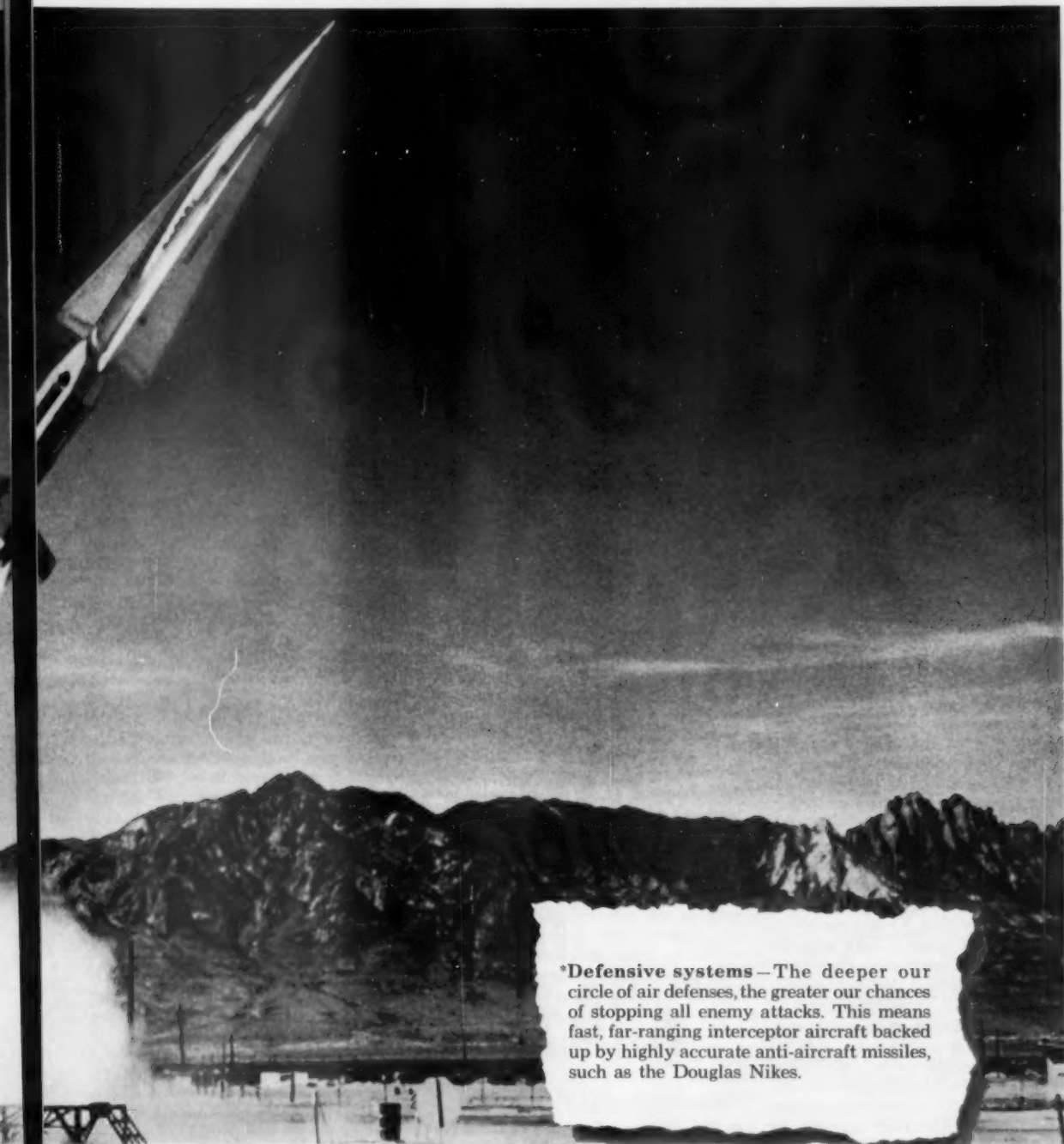
On guard at the outskirts of all major American cities and industrial centers, missiles of the Douglas Nike family are designed to intercept and destroy attacking aircraft—despite the most vigorous evasive action.

Nike-Ajax was the Army's first supersonic anti-aircraft missile. The basic design readily lends itself to

new developments as anti-aircraft requirements change.

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## THE MONTH'S MAIL

### *Fiscal Finaglers Have the Say*

● Congratulations on your excellent and timely "Words versus Deeds" [February], which pointed up the inadequacy of the Administration's FY 1959 budget for the Army.

It serves to illustrate what many news commentators and newspaper editors have covered in recent articles and broadcasts: that the "fiscal finaglers" have the last word and that, as a consequence, military expenditures are determined more by arbitrary fiscal or budgetary constraints than by the necessity for a program commensurate with the challenges of the times.

COL. H. E. BROWN, JR.

Arlington, Va.

### *It's All in How You Use Them*

● "Give the Battle Group a Punch," by Major Ross [January] contained some excellent ideas, but some of his statements deserve challenge. He recommends that we revive the antiquated 60 mortar and the 57 recoilless rifle. Does he propose that the rifle company carry two types of mortars and recoilless rifles? Or does he wish to junk the 81 and the 106? Neither of these solutions is feasible; supply and transport would be too difficult for the former and the very real need for the 81 and the 106 prevents the latter. He asserts that the 106 and M56 crews would be rather reluctant about engaging an enemy tank with either weapon. By the same token, fewer sane people would attack a tank with a 3.5 and not even a guerrilla would attack a T-34 with bottles of gasoline. Nevertheless, these things have been done, and done successfully. The idea that the 106 and the 90mm SP are defensive weapons only is erroneous. The family of ammunition for these two weapons makes the pieces either offensive or defensive, depending on our situation. The 106 rifle is extremely accurate at 1,200 yards. The HEP cartridge for this weapon is tremendously effective against personnel or field fortifications. The M56 mounts the same gun as the M48 tank and fires the same types of ammunition. The accuracy of this 90mm gun is not debatable, and mounted on the M56 carrier it is one of the most maneuverable, mobile large-caliber weapons in the hands of the infantry. The M56 can traverse terrain in minutes whereas the infantryman would need hours in country like jungle, snow or marsh.

The assault-gun platoon of the infantry battle group is equipped with tanks (four M48s). But why saddle the battle group commander with these four 49.5-ton monsters which he cannot take into jungle, mountains, arctic, or marshy types of terrain where Major Ross says the infantry is most likely to be committed? It stands to reason that if we are in the type of terrain that makes our tanks road-bound, won't the enemy's tanks also be in the same predicament?

The battle group commander does need firepower, but not in the form of organic tanks. It can come from the division's tank battalion in the form of an attached section, platoon, company or battalion. All this is available to the battle group commander without the constant headaches of ammunition and POL resupply, maintenance, or the thousand and one other problems inherent in use of tanks.

To avoid the problem in semantics, change the name of "assault-gun" platoon to something more in keeping with the platoon's primary mission. Supply the assault-gun platoon with 90mm SP M56s, mount the 106 on a full-tracked lightweight carrier and leave it in the rifle company where the company commander (the man who is doing the fighting anyway) can use it as an AT weapon in defense or as a direct fire-support weapon in offense.

There seems to be a widespread philosophy in the Army which seeks to solve all problems with more equipment. It would be better to concentrate on developing methods of employing and utilizing the capabilities of current weapons.

LT. HARRY C. SPAULDING

LT. WILLIAM T. PYE

Fort Benning, Ga.

### *November Cover*

● Yes, I want at least one of those November cover reprints! Since seeing it, I have asked the question so vividly answered by that cover of all men appearing before our "Group Soldier of the Month" board. Some knew the answer; too many did not. Shall we hide this information, or can long-time readers get more reprints at a nominal price? I would like to send copies to friends. They are worth two bits apiece to me, and I think other readers would like additional copies.

Please don't let this chance die of tell-

ing our people and the general public the message as we did General Fry's postage-stamp idea [ARMY, September 1955].

MAJ. ROBERT B. VAUGHAN  
Richmond 28, Va.

● This letter merited Major Vaughan a half dozen more reprints which we have sent him. We have filled a couple of hundred requests for the reprint of the November cover and still have a small number on hand.

### *The General Staff: An Anachronism?*

● In discussing the success of the communications network during Exercise King Cole, Col. Erling J. Foss [ARMY, November 1957] says: "The exercise's signal section was organized to function at the general staff level for the maneuver and the signal officer reported directly to the chief of staff. This set-up was important, for the efficient control and operation of the communications system would have been hindered had a set-up subordinating the signal officer to a general staff section been adopted."

Apparently, the premise is that a technical service special staff section cannot operate to maximum efficiency if it must function under a general staff section, thereby implying that the general staff system complicates and impedes staff functioning. Besides, "subordinated to a general staff section" indicates an increasing tendency to pyramid special staff sections and operating agencies under a general staff head, creating in effect a directorate.

Unfortunately, the case in point is not an isolated one; rather, it is symptomatic of a growing abuse of the existing staff system. To attribute this solely to ignorance seems fallacious. Since World War II, by far the majority of officers have attended at least one service school; many are graduates of senior schools.

There remain two possible causes: deliberate disregard for the system and its principle, and/or a lack of belief in its fundamental soundness. In either case, a complete reexamination of our staff system and staff training and its implementation, is indicated.

Our present staff system is of relatively recent origin, an adaptation of several European systems. It has been said that the best features of each were retained. This may be true, but our military posture has undergone many changes since we

adopted the staff system and it is quite possible that our system has not kept pace.

In today's Pentomic army and tomorrow's Futurarmy we cannot afford a staff system that does not instantaneously respond to the needs of lower units and the situation at hand.

MAJ. JACK W. TOOLEY  
APO 503, SF

### *Lessons of Indochina*

● It was certainly most generous of you to make "The Bloody Lessons of Indochina" [by Major Lamar M. Prosser, in our June 1955 issue] available to the Air Force Academy. This article will be one of the selections the cadets in the Military History Course will be required to read.

Could we impose still further on your generosity? Our printer has asked if it would be possible to obtain the negatives or a finished glossy print of the pictures that appeared with the article. We would appreciate obtaining this material from you on a loan basis if possible. Again, thank you for your aid.

MAJ. JOHN G. SCHLÖGL  
Asst. Prof. of Military History  
USAF Academy

● *We are happy we could be of service to the USAF's Academy.*

### *Queen of Battles*

● It is a long time since you wrote to me about infantry as the "Queen of Battles" or of "the battlefield." Since then I have asked a variety of people, including our War Office librarian, to trace its origin, but I am sorry to say with no success. I know that it is a fairly old term, but I can find no hint of it in any of my books.

MAJ. GEN. J. F. C. FULLER  
Crowborough, Sussex, Eng.

● *General Fuller's letter refers to an inquiry by a member of our staff made some months ago. See page 6, ARMY, February 1958.*

### *Pile Cap vs. Liner*

● The controversy that has developed over the articles on helmets by Norman Hitchman and Lt. Col. C. R. Cawthon [ARMY, September 1957] brings to light an important point. Opponents of the helmet ask: "How can a soldier wearing the helmet avoid the risk of frostbite in winter?" It seems the Army must develop a cold-weather liner, or the soldier must abandon his helmet and thereby risk head wounds.

I submit that the solution lies in our use of standard items of issue. Why not wear the helmet without liner, over the pile cap? Since our helmet is designed mainly to protect against fragments, not concussion, no serious loss of protection would result by removing the suspension

system in the liner. The pile cap is padded enough to make the helmet comfortable, even with earflaps down. I and others in my unit have tested this arrangement and it is satisfactory.

The issue problem would be simplified by having a fall turn-in of liners, and an issue of pile caps. These caps are worn in place of liners in garrison now. There should be little danger of frostbite while wearing pile caps inside of helmets.

Of course, the smooth surfaces of helmet and pile cap require buckling the helmet strap. However, with the quick release there should be little danger of broken necks from bullets or shell bursts.

LT. ROBERT COLLAR  
APO 39, NY

### *Travel Broadens the Mind*

● I believe adventure is essential for professional soldiers who are expected to lead others in wartime. Much has been said about improving the attractiveness of an Army career and while I don't deprecate the attractiveness of more money, advancement, increased opportunities on challenging assignments, and advanced educational opportunities, I note that any breakfast-food company can match most of these without too much difficulty. The only unique thing we offer is adventure, so we must continue to gear our program to attract the man who prefers adventure to the task of producing packaged break-

fasts for the rest of his life.

We have many young (and older) officers who were carefully selected for their martial qualities and who are capable of feats of adventure which would arouse envy in a Hemingway or a Halliburton. They are fettered by peacetime. Raw meat and hard training, fed to these men in large doses, results in a yen for release through the medium of adventure.

I have three regular lieutenants who have not a single service ribbon; they are acutely aware of the absence of this symbol of adventurous accomplishment. They have been to the proper service schools, are experiencing troop duty during an overseas tour, and are aware of what they can expect in future assignments. These young careers have been permitted to become so sedentary that they have married and have acquired children before the age of twenty-five. Nonetheless, they chafe at the bit and strain for action we cannot fully supply. Symptoms of itching feet appear only in a slightly less marked degree among officers who have been through rigorous campaigns.

To partly solve the problem, I propose a graduate-level program for adventure-some Army officers—something like the sabbatical leave employed by colleges and universities. At the end of each five or seven years of service, an officer, or a small group of officers, might apply for

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nine months or a year of leave in order to accomplish a specific proposed project. The primary criterion should be that the project afford opportunities for travel or adventure and permit directed release of energy toward a field not necessarily related to military duties. On his first trip to the Antarctic Admiral Byrd got a great amount of support from the National Geographic Society. The conquest of Mount Everest was organized as a non-military venture. The early history of our country is filled with the deeds and adventures of Army men who obtained short-term release from conventional and closely supervised duties. Projects like these should not be scoffed at by approving authorities: a uranium-prospecting tour; around the world by light aircraft; a safari and lion hunt in Africa; study of the war techniques of New Guinea headhunters; whaling in the Antarctic; retracing Hannibal's campaign in southern Europe.

There must be dozens of similar suppressed ideas within every Army officer who has manned a desk and swivel chair. The consummation of a small adventure every five years or so would bring back to the Army an officer refreshed by his accomplishment, and whose knowledge and value to the service has been thereby enhanced. This would advertise the adventurous aspects of the Army officer's life. I believe such a "graduate school of adventure" will hold the young officer after many of the other career incentive approaches have failed.

LT. COL. CARY A. KENNEDY, JR.  
APO 46, N.Y.

- Not to mention volunteering for the first flight to the moon—and in a U. S. Army spaceship!

### Importance of the Guard

- Recent developments and apparent future actions indicate that the National Guard is slowly being forced into a passive role in our reserve set-up. Early in 1957 the National Guard was ordered to reduce to a ceiling of 400,000 and evidently plans are being made for more cuts.

General Taylor stated that the National Guard and Army Reserve divisions and supporting units are a must in fulfilling our NATO commitments and increasing our readiness for a possible general war. He further stated that these forces have such important initial wartime roles as to justify giving them special assistance in raising the level of their combat readiness. Secretary Brucker at the Third Annual Meeting of AUSA indicated that he agrees fully with General Taylor's conception of the role of our reserve forces.

General Wyman, CONARC commander, said that of the National Guard units he visited during the 1957 summer

field training periods, virtually every unit was self-sustaining.

Lt. Gen. S. R. Mickelsen, former AR-ADCOM commander, stated that National Guard AAA units will steadily increase their role in operating Nike defense systems in CONUS. In the near future, 101 Army NG AAA batteries will enter regular weekly training in use of missiles at active Army Nike sites. These units are mostly from 25 AAA battalions presently manning guns on site in ten states and the District of Columbia. Guardsmen eventually will man half the Nike sites in the U. S.

The National Guard's past role in defense of our country is a matter of history. At present, and in the future, roles like aiding in local and national emergencies and aid to the Civil Defense Administration in event of atomic attack will be among its important functions, besides its primary mission.

Enlisted men of the NG are mostly young men who have had or are undergoing six months active duty for training, and men with World War II and Korea service. Excellent officer supervision coupled with such qualified enlisted men will produce efficient units able to cope with most situations they may encounter.

It should be evident to anyone who read the two articles on the Soviet Army in January's ARMY that it is preparing to fight any type of war. Its reserve forces are in proportion to the strategic missions they will be called upon to perform.

After studying Soviet Army techniques, one must conclude they are emphasizing atomic weapons and missiles, but much less than we do. They are as concerned with sustaining a large army equipped with modern weapons as well as development of atomic artillery and long-range missiles. They can see that even in an atomic war, large, well-equipped ground forces are vital for victory.

The National Guard is eager to begin converting to Pentomic divisions and battle groups so it can prepare for its role in atomic war.

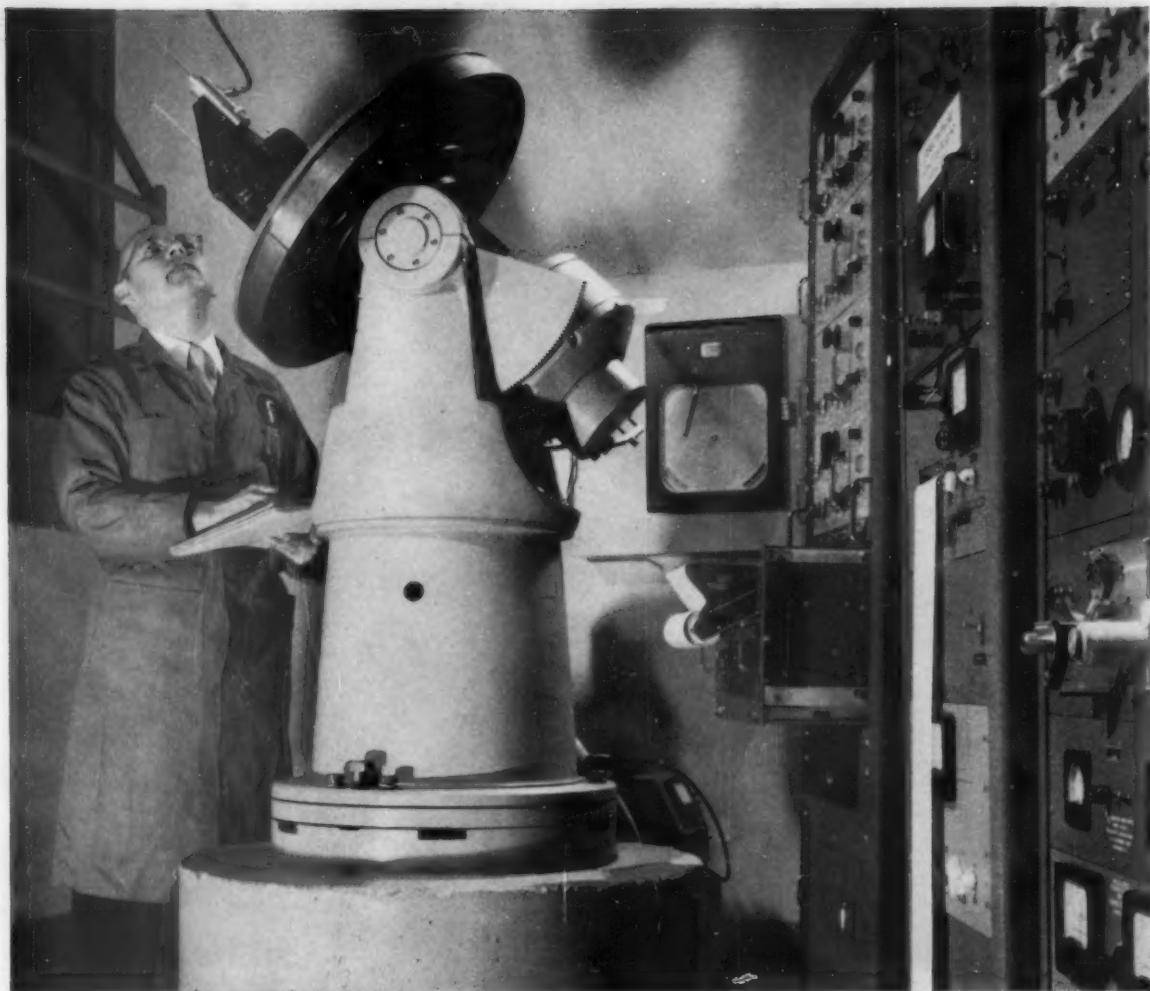
On the basis of what I have said, I don't see how we can conceivably consider cutting our active reserve forces. On the contrary, I think we must build larger reserve forces and train them in atomic warfare.

Where does the blame lie for the apparent lag in our reserve program? Instead of seeking a scapegoat, let's get our military and civilian leaders together and adopt policies that can be presented to Congress in such a way that it can't fail to realize the vital role the National Guard plays in defense of the Nation.

SFC GLENN C. BOWERS

Charlotte, NC





**Ford Instrument Co. Engineer** checks air-bearing gyro for angular drift on equatorial test stand. Test can show up drift rates as low as one revolution in 47 years. Tests like this . . .

## helped Army put "Explorer" into orbit

### Some of Ford Instrument's current or recent programs include:

- Inertial guidance systems . . . including Redstone and Jupiter
- Missile launching and control order computers
- Navigational and mission control systems and computers
- Analog and digital computer systems
- Fuzing, arming and other warhead control equipment
- Plotting equipment
- Nuclear systems and controls
- Gunfire controls
- Drone controls

A special guidance system for the Jupiter C, developed by the Army Ballistic Missile Agency, was used to launch the first U. S. artificial satellite into space.

Many components of this system were provided by Ford Instrument Co., prime contractor for both the "standard" U. S. Army Redstone and Jupiter guidance systems.

The fabulously-equipped, fantastically-clean gyro lab (above) is only a small part of the advanced research and

development facilities available at Ford Instrument Co. They're used to create and produce the incredibly accurate control systems called for by modern technology in both government and industry.

And Ford Instrument's large-scale precision manufacturing facilities can turn even the most critical system requirements into working "hardware" on a quantity-production basis. Our Liaison Engineers are at your service to discuss your system requirements.

e.e



## FORD INSTRUMENT CO.

DIVISION OF SPERRY RAND CORPORATION  
 31-10 Thomson Avenue, Long Island City 1, New York  
 Field Sales Offices: Beverly Hills, Calif.; Dayton, Ohio

NAA is at work in the fields of the future



## On these three men depends America's conquest of Outer Space

Very soon now an American is going to ride a rocket ship to the edge of space—and back.

The success of this first flight—and of the others that will follow—depends on the teamwork of the men who build the rocket ship, the men who become its ground-support technicians, and the men who form its air crew. For only the closest coordination of America's industrial, technical, and military skills can achieve the conquest of space.

### The X-15: Space Ship No. 1

The craft that is being readied for this first flight into space is the X-15, a rocket-powered research plane for the Air Force, Navy, and National Advisory Committee for Aeronautics. So advanced in design it might be called a manned missile, it's the forerunner of the craft that will cruise through Outer Space.

The assignment to design, build, and test the X-15 is being carried out by North American.



**Reliability Room.** Automatic control systems for America's manned and unmanned weapon systems must do their critical tasks with unfailing reliability. Even a tiny fleck of dust might impair their vital accuracy. That is why Autonetics assembles its control systems with surgical precision in this dust-free room.

#### Planes, brains and rockets

North American's key role in this great drive to put man into space is the result of its capabilities in the new technologies that make such a flight possible.

In supersonic aircraft, North American has had more experience than all other companies combined. In automatic controls—the electronic “brains” that will guide and navigate the X-15—its Autonetics Division has pioneered some of the most significant advances in recent years. Its Missile Development Division—pioneer of America's missile technology—is at work on an advanced air-to-ground (or space-to-earth) missile for the Air Force. And, in rocket propulsion, NAA's Rocketdyne Division is already delivering the great engines for America's major missiles—Atlas and Thor for the Air Force...Jupiter and Redstone for the Army.

#### After the breakthrough

These divisions of North American are making many important scientific breakthroughs in this race to space. But even more important is the ability North American has demonstrated, time and again, to turn today's experimental flights into tomorrow's standard weapon system

—swiftly, surely, and at lowest possible cost. For every breakthrough is only a new beginning; it's the *followthrough* that gets the results.

#### Ground support for space

One of the Armed Services' most difficult problems in the Space Age will be the increasing workload on their expensively trained technical manpower. That is why North American is designing a new kind of simplified maintenance into all airplanes, components, and automatic control systems.

This program will pay off in three ways: more efficient use of special skills; more complete utilization of weapons; more defense for the taxpayer's dollar.

In the arts of peace, NAA's Atomics International Division has developed two nuclear reactors that show great promise as practical sources of electric power.

*Today in North American Aviation and its divisions, you'll find as potent a combination of scientists, engineers, and production men as any in American industry. Because these men are constantly forging ahead into vital new technologies, much of their work holds great promise for science and industry.*



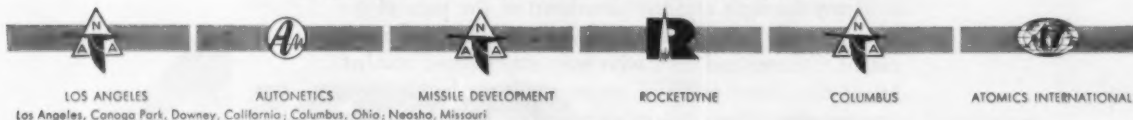
**Destination: Outer Space.** A man will soon look out on space from cockpit of the X-15, rocket-powered research plane now being readied for its flight test.



**Rocket Power.** NAA's Rocketdyne Division builds rocket engines with thrust to drive Air Force's Atlas missile—or to launch an earth-circling satellite.

## NORTH AMERICAN AVIATION, INC.

SERVING THE NATION'S INTEREST FIRST—THROUGH THESE DIVISIONS



LOS ANGELES

AUTONETICS

MISSILE DEVELOPMENT

ROCKETDYNE

COLUMBUS

ATOMICS INTERNATIONAL

Los Angeles, Canoga Park, Downey, California; Columbus, Ohio; Neosho, Missouri

## FRONT AND CENTER

### THE NEED FOR A MILLION-MAN ACTIVE ARMY

In his state of the Union message of 9 January 1958 President Eisenhower declared: "Military power serves the cause of security by making prohibitive the cost of any aggressive attack." The reverse of this is also very true: security is ill-served when defended by inadequate military power.

It is the position of the Association of the U. S. Army that the Nation's security is ill-served when the strength of the active U. S. Army drops below one million. This is a minimum strength and exceedingly conservative. General Gavin has recently stated that an active army of twenty-eight divisions would not be unrealistic in today's situation. Since this would require an active Army of more than 1.8 million, the conservative nature of the AUSA position is apparent.

A second objective of the Association of the U. S. Army is the creation of a four-division striking force within the U. S. Obviously such a force can only be created and maintained if the basic strength of the Army is large enough to provide for such a force. This again indicates that an army of a million men is a minimum requirement.

In the view of the AUSA, a force of a million men is a goal well worth working for at this time. It believes that achievement of this goal would accomplish several things beyond the very important one of adding at least one, and possibly two, combat divisions to the Army's active forces.

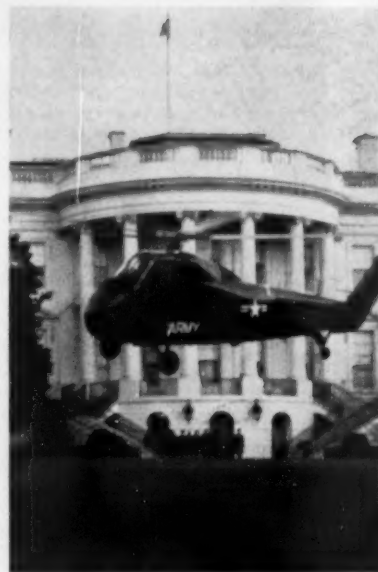
*First:* It would reverse the downward trend in active Army strength that began in 1953 and has continued year after year.

*Secondly:* It would serve as an unmistakable warning to the Communists that the U. S. was awake to the peril of limited conflicts.

*Thirdly:* It would assure the American people that if a limited war did break out there would not be a period of disaster marked by the sacrifice of American lives thrown into battle in inadequate numbers and with inadequate weapons and equipment.

*Fourthly:* It would emphasize the need for a faster pace in arming the active Army with the new weapons and equipment required by Pentomic divisions.

*Finally:* It would be a cheap price to pay for the uplift in spirits and sense of dedication to duty that would result. This the Army badly needs at this time. The effect on the active Army of successive reductions in Army strength and the slowdown of the pace of re-arming with new weapons should not be underestimated. Officers and men who have experienced combat know the bitter price of unpreparedness better than anyone else. Their spirits cannot but be affected by



An Army H-34 helicopter departs from the south grounds of the White House as part of a two-helicopter airlift of the President and his party to National Airport





## Lycoming puts top-flight power in the Vertol 105

Recently a Vertol copter's piston power plant underwent a dramatic conversion: its reciprocating engine was replaced with two compact Lycoming T-53 gas turbine engines.

The result—the Vertol 105, which operates at greater speeds, with greater loading capacity, and with a much lower noise level than the reciprocating engine version.

This conversion is proof to all copter manufacturers that they can install turbine power *without having to design entirely new ships.*

The powerful, economical T-53 is a product of Avco's Lycoming Division and was developed under the sponsorship of the U.S. Army and the U.S. Air Force. Lycoming engines power more different types of fixed and rotary wing aircraft than any other engines in the world.

**Avco today**—a diversified organization whose products include aircraft power plants and structures, missile research and development, electronics for defense and industry, and specialized home and farm equipment.

*Scientists interested in unusual opportunities for advancement can grow with Avco.*

**Avco makes things better for America**

# Avco

Avco Manufacturing Corporation  
420 Lexington Avenue, New York, N. Y.

the inconsistency of the position they find themselves in today. They see no diminishment of the Soviet threat to their front but at the same time they are harassed by the problems of meeting that threat with an eroding force.

AUSA is heartened by the statement of Rep. Carl Vinson (D-Ga.) that he is going to try to block the proposed 50,000-man cut in the strength of the active Army. After hearing Secretary Brucker state that he had recommended a strength of 925,000 for the active Army in Fiscal Year 1959 but had been overruled by the Administration in favor of an end strength of 870,000, Mr. Vinson declared that he would go before the House Appropriations Committee to argue for the Army's needs and was also prepared to "take the fight to the floor of the House" itself. Mr. Vinson is an able and knowing Congressman. As a longtime Chairman of the House Armed Services Committee he understands the services and their requirements. We think that as he studies the subject he will agree with the AUSA that a million-man active Army is a minimum figure; one that is economically sound, militarily necessary, and in the best interests of the Nation. AUSA will fully support Mr. Vinson in this endeavor. Now is the time to stop this erosion of Army strength.

#### THE PX SYSTEM PAYS GOOD DIVIDENDS

You can't put a dollar value on the worth of the Post Exchange system to the military services, especially in these days when military families are deployed all over the world. But for those who like to see black figures representing profitable enterprise, the \$56.3 million the Army and Air Force Exchange Service contributed to Army and Air Force welfare funds, libraries, hobby shops, dayrooms and so forth in 1957 was \$30.7 million more than the government spent in appropriated funds on the Post Exchange system in the same period. In other words if there hadn't been a Post Exchange Service the government would have had to appropriate \$56.3 million for welfare services that were paid for out of the profits of the Post Exchange Service.

That's good business in any language and we should think all taxpayers would encourage more of the same. But there are selfish interests that would destroy this essential service to Army, Air Force and Navy families. It is expected that this year the Washington representatives of these interests will by-pass the House Armed Services Committee, which has in the past shown an understanding of the value and usefulness of the PX system, and concentrate on the Appropriations and Government Operations Committees and possibly select committees on small businesses. Their argument will be that the government should withhold appropriated fund support

(Continued on page 70)



Captain James E. Bowman of the Army Aviation Board, Fort Rucker, Alabama, pictured with an Army YH-41 Cessna Seneca helicopter shortly before he set three new world's helicopter altitude records in the aircraft. Captain Bowman reached 30,335 feet to smash the record of 26,931 set by Jean Boulet of France in a gas-turbine-powered Alouette in both the unlimited weight category and the 1,102- to 2,204-pound category. In another flight he reached 28,200 feet to set a record in the 2,204- to 3,858-pound class. A citation awarding him the Distinguished Flying Cross for his feat stated that it enhanced "the Army's technical capability to accomplish its assigned mission under any condition of high density altitude operation."



The Army's turbine-powered Bell HU-1 helicopter has been ordered into production by an Air Force contract which authorizes Bell to tool up for quantity production of the high-performance, frontline service helicopter and extends production of this model through 1959

# Friendly Foe

When a new air defense missile is produced, its "kill accuracy" is theoretical until it is tested against a realistic target under operational conditions. The new, supersonic missile target, **USAF XQ-4**, is one of many "friendly foes" developed by Radioplane to simulate various air enemy threats.

Duplicating the performance and radar appearance of a supersonic, high-altitude bomber, the radar-controlled XQ-4 is designed to test the seek-and-kill ability of air defense systems and their missiles.

As major advancements have been made in U.S. Armed Forces air defense weapon systems, Radioplane has designed and developed targets compatible with the missions of these weapons. The XQ-4, for example, not only imitates invading bombers, but tallies up the score of hits and misses when fired upon.

Radioplane, the first to produce remotely controlled target aircraft, maintains dynamic research programs to seek low-cost solutions for tomorrow's defense problems.



## Radioplane

*A Division of Northrop Aircraft, Inc.*

VAN NUYS, CALIFORNIA, AND EL PASO, TEXAS



# EXPLORER:

## The Army Comes Through

**E**XPLORER is exactly the right name for the nation's first space satellite and it is in the American tradition for the Army to have launched it. The information Explorer is sending back through radio signals is the kind of information U. S. Army explorers always brought back from their far journeys. Example: The fame of the journals of Captain Meriwether Lewis lies in the information they contained about the topography, weather, native peoples, and flora and fauna of the trans-Missouri, Rocky Mountain and Pacific Northwest country that the Lewis and Clark expedition traversed. This was information that President Jefferson (and his successors) and the Congress needed in order to understand the problems of western expansion.

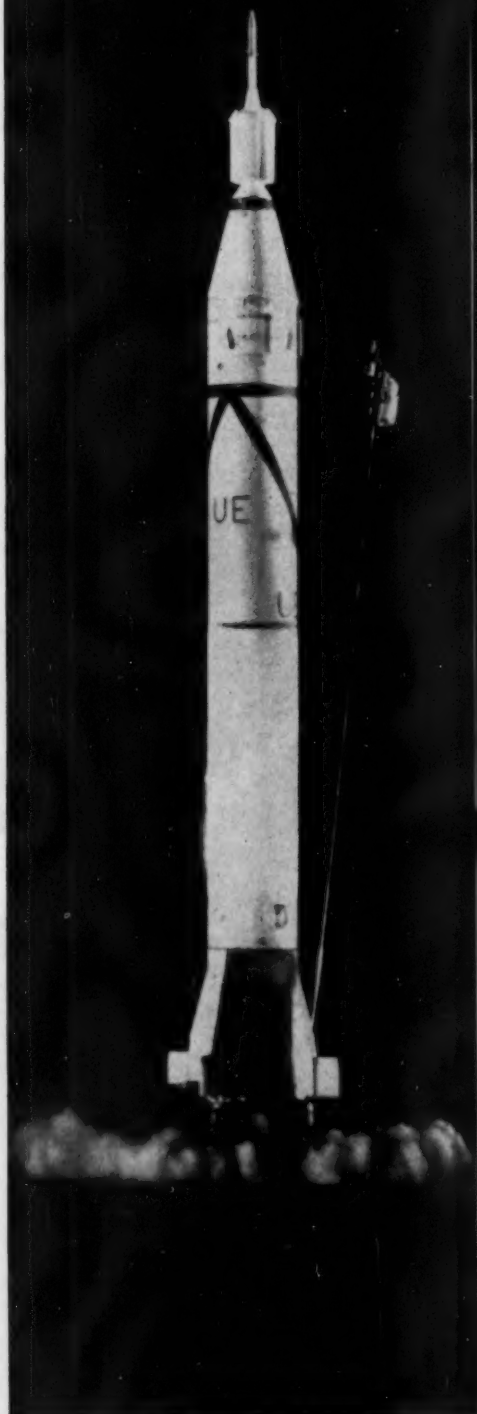
So too with the information coming from Explorer as it orbits through space. Where the information will lead no man can yet say. If there are some who doubt if it has much military usefulness, we can be sure there were some who doubted the military usefulness of the Lewis and Clark expedition. But President Jefferson had no such doubts. He could hardly have seen forty-eight states but he did know that the infant United States could not prosper if it remained cramped between the Atlantic and the Appalachians. If Thomas Jefferson were here today he would agree with Dr. Wernher von Braun who has said, "The conquest of space is essential to our survival."

We are happy that the Jupiter C lived up to its advance billings so magnificently. The praise that has been bestowed on the Army generally and the Army Ballistic Missile Agency specifically was well deserved and certainly no one can doubt now that the Army could have launched Explorer months ago.

Space has been penetrated but not conquered. Explorer is just the beginning. Even though we cannot see what it is at this time, we can be sure that the Army will have a vital role in space.

In this age of science an analogy from recent scientific history may be more convincing than the emotional appeal of comparisons with the great Army explorers of the 19th Century. In the few years that followed Hiroshima no one could quite see how atomic weapons could be used by armies. But a few years later much smaller "tactical" bombs became possible and with them came the age of "nuclear plenty." Today atomic weapons are rapidly becoming conventional in our Army and no longer is it said that nuclear weapons have destroyed an army's reason for existence.

The lesson is clear. Let's not have "expert" opinion yet on what the Army's job in space may be. But we can be confident it will have an important task.—J. B. S.





# The Hour of Triumph

**MAJOR VICTOR L. WALKER**

**T**HE die was cast. The teleprinter in the Department of the Army's comcenter, in measured clicks, announced:

HUNTSVILLE: ABMA-1 OFFICIAL

FOR D/A GUTHRIE FROM JEAN

THE COUNT IS ON SCHEDULE AS OF 1500 EST.

WEATHER AT THE CAPE IS FINE AND MAXIMUM UPPER WINDS STILL DO NOT EXCEED 120 KNOTS.

If the weather would only hold—or at least not worsen as it did for the two days previous when the Army tried to loft its satellite. Lieutenant Colonel John R. Guthrie, action officer for the Office of the Chief of Research and Development reached a message form and scratched out a message to Lieutenant Colonel J. N. Jean, anchor man at the Army Ballistic Missile Agency's telecon room:

WASHINGTON DA-4 OFFICIAL

REQUEST LATEST WEATHER FORECAST PRIOR TO 1930.

Colonel Jean answered:

HUNTSVILLE: ABMA-9

NO DETAILED WEATHER HERE SINCE MORNING. WILL QUERY

MFL (Missile Firing Laboratory, at Cape Canaveral,

Florida.) And as though to set the tension higher in the Pentagon's comcenter, Jean followed with:

THE COUNTDOWN IS ON SCHEDULE AS OF 1700 HOURS FOR LAUNCH AT 2230 HOURS, EST.

At Cape Canaveral's Missile Test Range, Major General John Bruce Medaris was also sweating out the weather. The high winds of the past two days could continue and force him to "scrub" the launching again. It was his decision to make, and the whole Free World looked over his shoulder while he made it. The winds early that Friday afternoon were strong—120 knots upstairs—but they were steady. General Medaris early that afternoon had decided to go ahead, to make the countdown.

The General peered through the green-tinted glass at his satellite-tipped Jupiter-C rocket, folded in the embrace of its servicing tower. Scientists and technicians in space-age garb swarmed around the monstrous rocket. The machine dwarfed the men. He touched off a cigarette and strode over to the control panel.

Robert Moser, former Army corporal, whose experience and know-how acquired in part under the Army's Scientific and Professional Personnel program equipped him for his job as head of the countdown procedure, removed one earphone of his headset to listen to his chief. They spoke quietly. The loud-speaker boomed intelligence through the blockhouse, but it failed to disturb the conversation.

**Major Victor L. Walker**, Infantry, was on duty in the Department of the Army's Comcenter the night Explorer was launched.

WASHINGTON DA-5

FOR ABMA FROM PROF VON BRAUN

DID 3D AND 4TH STAGES FIRE?

HUNTSVILLE ABMA-21 REF DA-5

DO NOT KNOW YET . . . GEN

MEDARIS SAYS HAVE A CUP

OF COFFEE AND

SWEAT IT OUT WITH US.



On a note of triumph, Frank's identity was lost Secretary Brucker, Dr. Pickering, Dr. Von Braun and Gen. Lemnitzer

These two men were teammates; they needed no raised voices to be understood.

Everything was going well. Too well. It was as though the missilemen were going through the motions in a buildup for another letdown. Afraid their hopes would hex the operation.

General Medaris moved off to another area, glancing out a blockhouse window at the preparations which continued in the waning light. Across the Florida dunes, lights began to flick on nervously.

At the Pentagon, the agonizing watch was on. The teleconferes who took their seats early included General L. L. Lemnitzer, the Vice Chief of Staff; Dr. Pickering of Jet Propulsion Laboratory; Ordnance deputy chief, Major General J. H. Hinrichs and his Research & Development boss, Major General August Schomburg; and Major General Harry P. Storke, Chief of Information, and his Deputy, Brigadier General C. V. Clifton. A principal conferee, too, was Dr. Werner von Braun, who was spirited into Washington for the occasion.

Dr. von Braun sprang from his chair in the telecon room to greet Secretary of the Army Wilber M. Brucker, who with Assistant Defense Secretary Murray Snyder, had hastened from a dinner over in Washington to sit in on this momentous event. Still in black tie formal, Secretary Brucker and Snyder added a flair and a contrast: General Lemnitzer and other General officers were in casual garb. They spoke to their chief and arranged themselves again in the telecon room, their eyes drawn to the screens. The ashtrays were filling up and the coffee thermoses were busy.

The teleprinters clicked their deliberate rhythm and the screens at one end of the room faithfully repeated their messages. The one on the right, which reflected the incoming messages, read:

HUNTSVILLE: ABMA-18

THE COUNT IS 70 AND COUNTING AT 2124 EST. and then fell silent. When it started again, it messaged:

AT 2134 HOURS EST JUPITER-C WAS AT LAUNCH TIME MINUS ONE HOUR AND COUNTING. WEATHER AT THE CAPE IS GOOD AND UPPER WINDS ARE MUCH LESS THAN THEY WERE 24 HOURS AGO. AN AIR OF CAUTIOUS OPTIMISM PREVAILS.

There was a stirring in the room, like a slight wind sweeping through a forest. Maybe the Army was getting a break at last . . .

Colonel Guthrie reached a telephone and talked with someone at the Naval Research Laboratory, nerve center for Vanguard.

The ashtrays were full.

The teleprinter thumped again:

HOLDING AT X-45 WHILE CHECKING A POSSIBLE FUEL LEAK IN THE TAIL. . . .

"Hell!" someone whispered, remembering the Vanguard's history of small flukes turning into disasters. The conferees exchanged cigarettes and lights.

A quick check by scientists at Canaveral followed. Just an overflow.

The teleprinter moved again:

HUNTSVILLE: ABMA-19

THE COUNT HAS BEEN RESUMED AT X-45 AT 2203 EST. THE SERVICE STRUCTURE HAS BEEN MOVED BACK ABOUT 20 FEET.

AT 2208 IT IS X-40 AND CONTINUING.

JPL'S LITTLE PEEPER IS PEEPING. The satellite's transmitters had been activated. CHANGES TONE EVERY 30 SECONDS.

STILL GOING SMOOTHLY. TELEMETRY HAS BEEN TURNED ON, CALIBRATED, AND TURNED OFF. THE COUNT IS NOW X-32 AND COUNTING AT 2216 EST. CAMERAMEN ARE READY TO START PHOTO COVERAGE WHEN SEARCHLIGHTS COME ON SHORTLY.

SEARCHLIGHTS ARE BEING TURNED ON AT X-30.

X-28 AND COUNTING AT 2219 EST. CAMERAMEN ARE SWARMING ALL OVER THE PAD.

X-27 AND COUNTING AT 2221 EST. THE CAMERAMEN HAVE UNTIL X-21 TO FINISH THEIR JOB AND GET OFF THE PAD.

EYEWITNESSES SAY THAT THE MISSILE IS A BEAUTIFUL SIGHT WITH THE SEARCHLIGHTS PLAYING ON IT.

SERVICE STRUCTURE IS MOVING BACK INTO FIRING POSITION.

X-21 AND COUNTING AT 2227 EST. PEEPER IS STILL PEEPING.

X-17 AND COUNTING AT 2231 EST. THINGS STILL GOING SMOOTHLY.

THE IGNITER IS BEING BROUGHT UP AND CONNECTED. HUNTSVILLE: ABAMA-20

X-11 AT 2237 AND COUNTING.

THE CLUSTER IS BEING REVVED UP. The high-speed unit, designed to impart a bullet-like spin to the satellite. 370 RPM NOW . . .

440 RPM . . .

470 RPM . . . EVERYTHING GOING FINE

THE BLOCKHOUSE IS BUTTONED UP. THE COUNT IS X-7 AT 2241 EST. . .

X-6 AT 2242 . . . EVERYTHING IS OPERATIONAL.

Robert Moser pressed his earphones more tightly to his head, glanced at his countdown schedule, and directed the sequence recorders be turned on. His eyes raced across the meters on the control console.

X-2 MINUTES . . . LIFTOFF IS SCHEDULED FOR 16 SECONDS AFTER X-0.

Two minutes to go.

In Moser's earphones the voice was jarring: "We have a jet vane deflection!"

With 100 seconds to go, Moser spoke through his mike to Dr. Kurt Debus, Missile Firing Lab chief. "What do you want to do?" he asked tensely.

Debus's eyes bored through the window, then he waved to Moser. "Forget it," he said.

"Rudder drive on!" Moser continued his countdown.

X-1 MINUTE . . . FINAL WEIGHT MEASUREMENT BEING TAKEN. SPINNER STILL RUNNING SMOOTHLY.

The teleprinter raced to keep pace with the event.

At X-30 Ex-Corporal Moser began to call out the final seconds whipping by: "X-30, 20, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1—Firing Command!"

Moser hesitated only a moment in the charged atmosphere. "Fuel tanks pressurized," he intoned quietly.

A burst of flame roared out of the rocket. The sound quaked the concrete blockhouse. The rocket rose with awful majesty from the pad; picking up speed, it screamed skyward.

The time was 1048 hours, Eastern Standard time . . .

The launching countdown was over, and the rocket has been committed. The launching was an unqualified success. His job done, General Medaris rushed to the Jet

#### AUSA ADDS ITS CONGRATULATIONS

*This is the text of the telegram AUSA sent to the Secretary of the Army following the successful launching the Explorer.*

Honorable Wilbur M. Brucker  
Secretary of the Army

Association of the United States Army is proud of the Army latest accomplishment. Congratulations to all.  
John Slezak  
President, AUSA

Propulsion Laboratory building to watch his baby on the DOVAP system.

Newsmen moved copy. Canaveral went wild. One network newscaster reporting the event from the crowd of viewers was cut off the air because of the unrestrained, shouted comments of onlookers egging the rocket spaceward. . . .

It wasn't hot in the telecon room. The Pentagon's temperature is regulated nicely. But at 1050 hours, a dozen handkerchiefs wiped as many brows. The teleprinter had raced:

LIFT OFF

STILL GOING

STILL GOING—LOOKS GOOD The excited operator spelled it that way.

90 SECONDS

HAS PASSED THROUGH THE JET STREAM

Dr. von Braun kept his eyes glued to the screen. A lock of his hair tumbled across his forehead. This was the hour he'd waited a lifetime for.

SECOND STAGE IGNITION OK, the teleprinter reported.

Someone passed doughnuts and coffee around. Cigarettes were popular at that moment.

Von Braun pencilled a message which shortly flashed on the outgoing screen:

WASHINGTON DA-5 OFFICIAL

FOR ABMA FROM PROF VON BRAUN

DID 3D AND 4TH STAGES FIRE?

(If the high-speed stages had not fired, there was no chance for an orbit.)

HUNTSVILLE ABMA-21

REF DA-5

DO NOT KNOW YET. WILL LET YOU KNOW SOON AS POSSIBLE.

GEN MEDARIS SAYS HAVE A CUP OF COFFEE, SMOKE A CIGARETTE, AND SWEAT IT OUT WITH US.

Someone finally emptied the ashtrays. The doughnuts went begging.

The teleprinter inserted some encouragement:  
HUNTSVILLE: OFFICIAL COMMENT

FOR PROF VON BRAUN AND DR PICKERING FROM GEN MEDARIS AND [Dr. Jack] FROELICH.

NOT FOR PUBLIC RELEASE

THINGS LOOK GOOD. MINITRACK ACQUIRED. ANTIGUA DOPPLER HAD NOT ACQUIRED, BUT THEY ARE EXAMINING TAPES. DURING THE PERIOD FOR NOMINAL HIGH SPEED STAGE OPERATION CLUSTER FREQUENCY SHIFT WAS OK. AZIMUTH WAS SOLID BY ALL INDICATIONS . . . ALSO, ALPHA APPEARED OVER ANTIGUA AT THE PROPER TIME.

Dr. von Braun brought his sigh of relief from way down deep. He looked at the clock and fingered his slide-rule.

The doughnuts looked appetizing.

Colonel Guthrie snapped a look at the clock. It was going to be a long wait. One hundred and six minutes. He touched off another cigarette, and shrugged.

The Secretary of the Army talked in low tones with some of the other conferees. The clock was reluctant to move. Coffee was popular.

Sixty minutes passed. Ninety. Someone emptied the ashtrays, and someone else—probably at direction of Colonel H. B. (Red) Ayres, host at this comcenter party—brought more coffee.

One hundred minutes. Dr. Pickering was on the phone, talking with the Jet Propulsion Laboratories at Pasadena, California. JPL was to confirm the orbit by reporting a fix on the satellite from the West Coast trucking stations. Two stations could establish the orbit. Three were needed to confirm it.

"Frank," Dr. Pickering queried, "anything yet?" He looked over at Dr. von Braun.

One hundred and four minutes.

One hundred and five.

"Frank, you hear anything yet?"

"Who in hell is Frank?" someone asked.

Silence. One hundred and six minutes. Orbit should have been confirmed.

The clock was racing now.

Dr. von Braun whipped out his slide-rule. He made some calculations on a piece of scratch paper. He looked up, a puzzled expression giving way to a pleased one. The apogee must be higher than they had hoped for. Took longer for the satellite to make the trip. The more elliptical the orbit, the more samplings the satellites could make. Good.

One hundred ten minutes.

"Frank," Dr. Pickering yelled into the phone, "where the hell is it?"

"Who's this Frank?" someone asked again.

Pickering held up his hand for silence.

"Got one!" he announced.

The clock was in a hurry. Colonel Guthrie's eyes kept drifting to it. One hundred and eleven.

"Frank . . . oh. Got two now," Dr. Pickering announced, flicking his eyes over toward Secretary Brucker, and holding up two fingers.

Colonel Guthrie was talking with Naval Research Laboratory on the direct line.

"What about Panama, Frank?" Dr. Pickering asked.

Pickering's face lighted. "Thanks, Frank." He cradled the phone. His shoulders lifted slightly, despite the fatigue.

"It's in!" Dr. Pickering shouted.

Dr. von Braun pocketed his slide-rule. He looked around for his coat. The press would be waiting at the National Academy of Sciences.

Secretary Brucker beamed at the gathering. He lifted his right hand in Churchill's immortal V for victory gesture.

Colonel Guthrie loosened his tie.

The Army had come through. We had picked the Nation up by its bootstraps. The U. S. was in the space business, and it had been the Army who did it.

The conferees posed for pictures. They slapped each other on the back. No one said much, though. What can you say in a triumphal hour?

The ashtrays were full again . . .



# 11 Men

**You can't see an infantry squad — it is an idea  
that exists only when jointly held by its members**



The author of this article states therein that very little has been written about the training and fighting of the infantry rifle squad. We would quarrel with that statement if it wasn't clear that he meant officially written field manuals. For the fact is that a great deal has been written about small-unit infantry combat, some of it by persons who advocate the development of a large number of "set play" patterns.

The author of this article believes that forceful leadership is essential to success in battle, but he also believes that simple battle drills are superior to intricate "set plays." He advocates a simple SOP that constitutes an "understanding" within the squad of what each man is to do. This helps the squad leader by making his task

manageable. But he still must lead—which means as Benning teaches: "Follow Me."

Colonel DePuy, who is now on duty in the Pentagon, served in Europe during the campaigns of the Second World War. He tells us that he adopted the squad organization and techniques he describes here while commanding an infantry battalion in Germany in 1954. Squads so trained consistently outscored their counterparts in sister battalions of the same regiment, as did the platoons comprised of those squads. It is of interest that a press release of the 3d Infantry Division at Fort Benning recently reported that a company in a battle group of that division is using the system described here.

# 1 Mind

**COLONEL WILLIAM E. DEPUY**

THE more startling become the scientific advances of this most startling period of history the more necessary it is to protect the lands wherein the scientists work. The more fantastic become the vehicles of interstellar space, the more precious are the areas from which they are launched and the natural resources from which they are fabricated.

No, Mr. Infantryman, you are not obsolete—you have never been more relevant to your country's need, nor more important to its future. For no one yet has discovered how to acquire or defend land areas without you.

Constant efforts to improve your ground fighting techniques are therefore necessary and you should proceed with this without apology to the missile and atom men for you are not in conflict with their purposes. You are simply at work on another part of the same huge problem of survival.

There is a tendency to misunderstand the fundamentals of war these days. There are people who are apparently convinced that nuclear firepower has replaced manpower and therefore Army forces are obsolete. Now it would be foolish, indeed, to forego the power of the most modern weapons. But the nuclear-weapons-will-do-it-alone theorists are out of contact with reality. Their ideas simply do not engage with the facts of warfare as they exist. Military targets for nuclear weapons will only form when attacking ground forces pile up against the barrier of defending ground forces or when they voluntarily mass to force a breach of those defending forces. Without a defense on the ground, nuclear weapons, whether delivered by aircraft or missiles, will not find targets, and like a hammer without an anvil will strike ineffectively.

This country must always be able to fight on the

ground and stand up man to man against its enemies. To the infantry small-unit leader the larger strategic situation is a matter of complete indifference. He lives in a small world of attack and defense which is all his own. The larger aspects of battle are the concern of others. Missiles may fly and nuclear weapons thunder but so long as he lives he must fight on about the same terms as his ancestors—man against man—where the fire of courage and the coolness of competence mark the victor.

## Theory and practice of the rifle squad

There is much reason then to concern ourselves with the theory and practice of training and fighting a rifle squad. Oddly enough, very little has ever been written upon this subject. Field manuals devote a page or two to the fighting of the squad and thousands of pages to the organization and techniques of higher formations, many of which exist only to get the squad into contact and support it there. Perhaps this is because the squad is thought to be a small and simple command about which there is just not much to say. Nothing could be farther from the truth. The squad is perhaps the most challenging of all combat commands because it is the only military organization which is comprised of *men*, not *units*. All commanders above the squad learn how to employ units. The commander of a squad must learn how to employ men.

Soldiers who work with cannons and tanks, or aircraft or ships, sometimes find it difficult to appreciate the vast difference in the problem which faces the soldier who works with men—not equipment. Sometimes, like the air we breathe, we overlook that which lies too near at hand. That which is a part of us is

not so easy to see and seldom noted. The command and motivations of men in peace or war within the military service and outside are a problem in mental imagery—a problem in abstractions. The leader has a scheme which he must transmit by word of mouth, to create a facsimile of his scheme in the *minds* of his subordinates. We do this every day. This is the stuff of which all human intercourse is made. What raises this commonplace process to a critical consideration in infantry combat is the absence of an orthodox function and the general lack of mechanical substitutes for purely human organization.

For contrast let us consider for a moment the howitzer and crew. The howitzer itself is the concrete expression and permanent embodiment of a common purpose. Rain or shine, day or night, the howitzer stands unchanged. It is served in battle by men who relate their activities to it, and mobilize their energies around it. The howitzer is functional, constant, central and immutable. So is a destroyer and so is a bomber. The physical presence of a machine of war provides continuity of purpose and ties the energies and activities of the human crew into the performance of a military function.

#### Figment of the mind

On the other hand, what do we find in a rifle squad? A squad is an organizational idea jointly held by its members. It does not exist physically—you can't see a squad—you can only see the individuals who man it. To illustrate this point, it is impossible to distinguish a trained squad from a random collection of individuals if both groups are equal in number, similarly equipped and standing idle alongside a road. The difference is lying quietly hidden in their minds. Furthermore, even a trained squad ceases to exist whenever its members revert to the normal human state of egocentricity.

Only when the members of the squad are thinking jointly on one problem may they properly be called a squad. Here, then, is the great overwhelming feature which distinguishes the rifle squad from the gun, tank, plane, or ship's crew. A squad is an idea shared by a group of men. Unlike the steel of a tank an idea is ephemeral—fragile—fleeting. Thus it is that the hardest fighting known to man—the personal face-to-face grubbing and killing of the infantryman—is prosecuted with the most sophisticated, least standardized, most unpredictable and least understood of all of the tools of war—the human mind.

The sergeant wonders why his squad seems to be wandering aimlessly around the hillside instead of attacking according to his plan. The reason—the sergeant's plan is in *his* head, not in theirs. His squad is proceeding on many divergent assumptions in the absence of simple complete instructions on the basis of which they could act in concert. The sergeant issues an order to move across a field. The ten men hear—obey—become a squad momentarily. Halfway across

the open field they are fired upon. The sergeant's orders provide no basis for a response to this new situation so the squad disintegrates and becomes ten separate frightened men thinking about themselves. A squad is here this moment, gone the next. It coagulates around a common purpose, fully understood, and it melts away in the presence of uncertainty, confusion, or the absence of direction. Unfortunately, the battlefield produces a great number of egocentric reactions which are destructive of mental images. Fear, hunger, pain, and fatigue all cause a man to think of himself. While he is thinking of himself he becomes wholly an individual and is not mentally, for that time at least, a member of the squad. Thus, the environment of the battlefield is conducive to the disintegration of the squad, not its cohesion.

The commander of a squad is constantly faced with two supremely important tasks:

*First*, he must decide on a course of squad action which will achieve his objectives, and

*Second*, he must organize his squad around a jointly held image of this course of action in sufficient detail to provide adequate instructions for each squad member.

As if this requirement were not challenging enough, the average squad leader suffers under a number of additional handicaps. He usually commands men who are not the most imaginative members of the military establishment—in other words, men who are not as fast with an abstraction as their former colleagues who have been promoted or assigned technical or administrative jobs. Also, the squad leader must practice his art only after his mind is numbed with fatigue and fright, his body weakened by hunger and exposure, and the receptiveness of his squad partially dulled by casualties. Add to this the fact that battlefields are noisy and otherwise distracting and you have set up a requirement to try the mettle of any man.

For all of these reasons, both theoretical and practical, most squads are poorly commanded, if at all. Only too often in training, inept squad leaders exhort their men during an attack with such pseudo-commands as "*fire and movement*" or "*keep it moving, men.*" No soldier has ever heard the command "*fire and movement*" on the field of battle and no man alive gets a very useful picture in his mind from such a command.

In fact, on the field of battle this kind of squad leader usually does—nothing. A soldier who risks his life deserves as a minimum to know generally what it is that he is expected to do.

#### The organizational solution

One would seem to be justified in guessing that the recent organization of the rifle squad into two teams was prompted by an urge to substitute the simplicity of organization for the uncertainty of human behavior. The Army is at home and at ease with the relations between units and

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# SEA TRANSPORT IN ATOMIC WAR

**Faster discharge of  
cargo will be imperative**

**MAJOR GENERAL NORMAN H. VISSERING**

**W**HILE the space age has the headlines, our lack of progress in many other essential military fields goes largely unnoticed. This is particularly true of our very limited capabilities to transport supplies to our forces in the field in an age of atomic warfare.

While the development of intercontinental ballistic missiles provides a means of causing mass destruction within the heartland of a distant enemy, these weapons do not eliminate the necessity of maintaining a balanced force for our national defense. While we are focusing attention on space, we must not lose sight of the fact that the Russians also have the world's largest army and that this army is being rapidly equipped with excellent tanks and atomic weapons. Destruction of targets within the Soviet Union alone would not necessarily destroy their war-making potential if their land forces succeeded in capturing the industrial base of Western Europe. We must retain our capability to wage war on the land, and we must be capable of supporting our own armies and those of our allies.

Delivering supplies to a theater where we are opposed by an enemy who possesses atomic weapons, ballistic missiles and air power poses problems which are without parallel in history. These problems, however, are not necessarily insoluble provided timely preparations are made. Air transport is of course a basic essential for the fast movement of troops and supplies. We need all we can get, but for the movement of the vast tonnages required to support a modern army we must still place primary reliance on sea transport and we must maintain a capability for sea movement.

The Army Transportation Corps has long recognized that we can no longer rely on the use of conventional ports for discharging sup-

**CONCENTRATION OF SHIPPING SUCH AS OCCURRED OFF NORMANDY IN 1944 WOULD BE AN OPEN INVITATION TO DISASTER IN ATOMIC WAR**





plies in an overseas theater of war. Concentrations of shipping, such as occurred at Normandy, Antwerp and other European ports during World War II or at Pusan during the Korean conflict, would be an open invitation to disaster. It is recognized that we must disperse our points of discharge and be prepared to handle the majority of our cargo over the beaches.

#### **Dispersal not the full answer**

This dispersed method of operation has many drawbacks, however. It is difficult to control and requires tremendous quantities of special equipment. Much work has been done on the development of special vehicles, landing craft and other equipment to facilitate beach discharge, but the quantities of such items actually on hand are not sufficient to support large forces ashore.

Individual ships at anchor in widely dispersed areas along a coastline are easy prey for enemy submarines or low-flying aircraft and offer an extremely difficult protection problem for the Navy. The time when ships are so exposed to attack must be reduced to an absolute minimum. Much thought has been given to improved methods of discharge, but we are still dependent on substantially the same types of merchant ships which supported our forces during World War II. It still requires approximately four and one-half to five days to discharge a ship loaded with general cargo in the stream under near optimum conditions. Such a rate of discharge would only be possible if we had an ample supply of lighterage, plenty of labor and no interruptions due to weather, enemy attacks or other reasons. In actual practice, we might do well to average ten days per ship, and some ships would take longer.

It requires approximately 700 men to work a ship around the clock in the case of offshore discharge. This figure includes the gangs which are working the ship, the crews of landing craft, tugs, DUKWs and other floating equipment, plus a shore party. In conventional ports, we rely largely on civilian labor for such tasks, but if we disperse our operations along an entire coastline, civilian labor will be difficult to obtain. While we do have troops who are trained and equipped for this purpose, the number currently available is also inadequate to support large forces.

#### **New types of merchant ships**

The answer to this dilemma of handling cargo in an overseas theater lies in the development of new types of merchant cargo vessels. Let us consider the characteristics desired in an ideal ship.

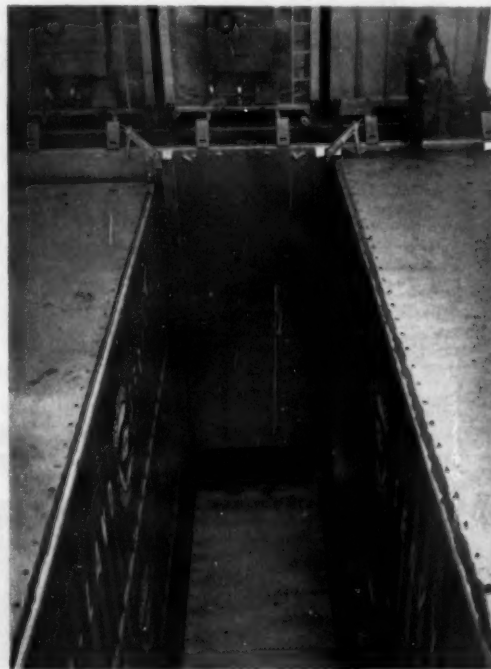
First, it must have sufficient speed so that it is relatively invulnerable to submarine attack if it is running at sea without escort. How much speed and why is it essential? During World War II most of our ships moved in convoys. This method of movement has obvious advantages for protection against conventional submarine attack. Today, however, if we are dealing with an enemy who has thermo-

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#### **COMMERCIAL LIFT-ON-LIFT-OFF SHIPS**

The Gateway City, shown on these pages, is one of four C-2 cargo ships operated by Pan-Atlantic Steamship Co., between Houston and New York City that has been converted to the lift-on-lift-off of containerized cargo, in this case bodies of tractor-trailers that can be easily and quickly removed from the chassis (see photo lower right).

These vessels can carry 226 trailer bodies or, in terms of average military cargo, a payload of 5,040 short tons. They are equipped with traveling gantry cranes on their fore and aft decks which are capable of lifting normal loads of 25 tons or up to 40 tons in an emergency from the ship's hold and depositing them ashore. (The overhanging arms of the cranes fold down when the ship is at sea.) While they are specifically designed for the carriage of a standard container, they are adaptable to the carriage of vehicles, palletized cargo or other types of containers by the use of floats 35 feet long by 8 feet wide which would fit into the guides in the holds which retain the trailer bodies. The photo below shows the hold of the vessel with trailer bodies in place. It is hoped eventually that these ships can be unloaded and reloaded with empty containers in a period of ten to twelve hours. Presently in actual practice a considerably longer period is required, but the crews are still being trained, equipment is being tested, and the urgency for speed is less than would exist under combat conditions. A crew of only thirty men is required to load or unload these ships and all of the technicians in such crews can be carried aboard.







Until Army missiles become fully operational, the coordination of joint ground-air operations must necessarily continue. This problem has never been resolved to the satisfaction of everyone, but here is reported a new approach recently developed and adopted by the Army's Continental Army Command and the Air Force's Tactical Air Command.

## New Training Text for Air-Ground Operations

**Lieutenant Colonel David J. O'Rourke**

**A** NEW approach to the vexing problem of close air support is revealed in the recent publication of *Joint Air-Ground Operations*. This training text (officially TT 110-100-1/TACM 55-3) was written and published as a joint project by Headquarters United States Continental Army Command and the Air Force Tactical Command. It develops jointly acceptable procedures for air-ground operations in order to facilitate the accomplishment of training missions by these two commands.

Superseding *Joint Training Directive* of 1 September 1950, which has been obsolete for some time, this manual offers guidance in doctrine and procedures for conducting close air support, tactical air reconnaissance, controlling and coordinating atomic weapons, interdiction, weather intelligence and air defense. These procedures are considered valid for the time frame through 1962, based upon current and planned equipment and weapons, and new organizational concepts being implemented by the Army and Air Force.

A most significant feature is that the manual recognizes the increased ability of the field army to provide its own air defense and long-range fire support with organic surface-to-air and surface-to-surface missiles. The air-ground operational procedures it outlines fully recognize this increased organic ability by acknowledging the army commander's responsibility for air defense of his own units and installations, and his primary responsibility for all combat operations

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**Lieutenant Colonel David J. O'Rourke**, Infantry, went from the North Dakota National Guard to the Americal Division in 1941, and served with it in the Pacific, rising from private to battalion commander. He has been a National Guard Advisor, served in Greece and Austria, and is now Chief of the Air Support Group at USCONARC Headquarters.



within an area extending one hundred miles forward of the general line of contact between friendly and hostile forces.

Though the basic problem of coordinating joint air-ground operations is primarily an Army-Air Force problem, the Navy participated in developing the procedures in the new joint manual and has agreed to its provisions where naval operations or support might become involved.

### Elimination of JOC

The major change in control and coordination of Air Force tactical support of the Army is the elimination of the joint operations center (JOC) concept. Future joint operations will be coordinated between two unilateral agencies both located at field army headquarters: tactical support center (TSC) and air support operations center (ASOC).

By definition, the air support operations center is a small, highly mobile Air Force agency located at field army headquarters for finally controlling and coordinating the tactical air effort allocated to ASOC in direct support of the army. One ASOC is provided by tactical air force to each field army. The ASOC director is an Air Force brigadier general who also controls the air liaison officers (ALO) and forward controllers assigned within the field army.

The tactical support center is a centralized agency which the army commander uses to control and coordinate all combat and combat-support operations. TSC is not an added agency but a regrouping of certain operational elements of the general and special staffs to facilitate the control and coordination of tactical operations.

The building block upon which the new air-ground procedures are based is the

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Pathfinder guides H-34 helicopters to landing points within the landing site

# ARMY PATHFINDERS

## ADVANCE PARTY FOR AIR MOBILITY

**CAPTAIN JOHN E. STANNARD**

**T**HE large number of organic aircraft that the field commander must have to give him battlefield mobility is not the full answer to his battlefield air transportation problems. He has a need for guidance and control of these aircraft from the ground delivery areas; guidance, to aid in navigation to the proper area; and control, to assure safe, rapid, efficient deliveries at the exact points desired.

You can't always get pin-point accuracy from Army aviators, since navigating to an exact spot on the ground is not easy under good conditions and can be most difficult when visibility is poor, weather is bad, and the

landing area is hard to find. Unfortunately, instruments presently available in Army aircraft do not enable pilots to find exact ground locations under all visibility conditions without assistance from the ground.

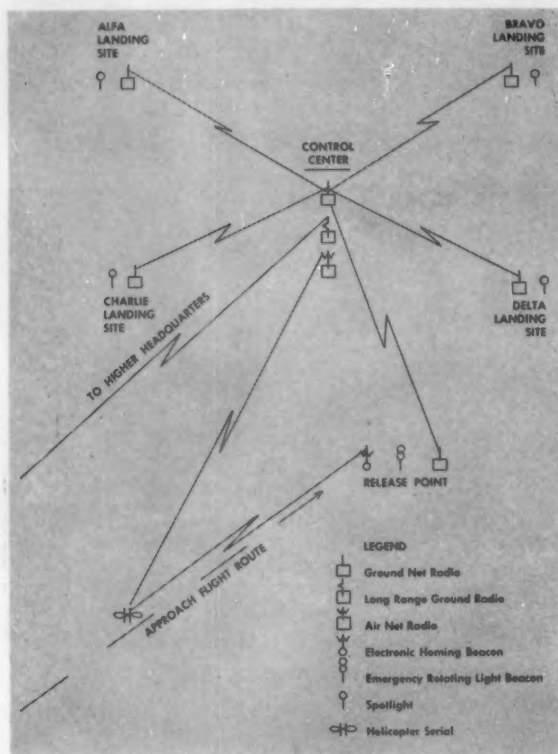
Once aviators have located an area, they still face the problem of making rapid, safe deliveries at the exact points desired. Because of the speed at which he travels, distance means relatively less to the pilot than it does to the infantryman, and terrain locations are difficult for him to pin-point. Five hundred yards, a very short distance to the aircraft pilot, is a long, long way to the infantryman if it means moving that distance under fire or while carrying a mortar or ammunition on his back. If we are to get maximum effectiveness from air transportation, loads must be delivered at the times and places desired and not a few hundred yards away nor a few minutes late.

For aircraft landings, the assistance needed is the same general information and control furnished by the control tower at any airfield: wind direction and velocity, traffic pattern, order and direction of landings and take-offs, exact landing and parking points, and

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## SCHEMATIC OF HELICOPTER LANDING ZONE



necessary taxi instructions. Such assistance can be properly furnished only by personnel on the ground in the delivery area.

### Ground assistance equals speed and safety

This is not to say that it is impossible for aircraft to make deliveries without ground assistance. It can be done but deliveries will not be as rapid, as safe, or as accurate as when the aviator has the assistance of a man on the ground. Rapid, large-scale, night aerial deliveries are impractical without ground assistance.

Future developments may furnish pilots with improved navigation devices which unfailingly locate an exact delivery point on the ground. However, it is doubtful if such devices will indicate the presence of obstacles and wind and ground surface conditions on night landing areas, or the presence or absence of the enemy. Until such an all-purpose device is perfected, necessary guidance and control of aircraft should be furnished by aids operated by trained personnel on the ground.

### Army pathfinders

The solution is not dependent on development projected for the 1960s or beyond. We now have the nucleus of trained pathfinder personnel, equipment, training facilities, and techniques necessary. They are in operation and ready to be put to use. Pathfinders



Pathfinder at control center of landing site relays wind information to incoming aviators



Pathfinder with the equipment he will need parachutes from an L-20 to a pre-selected landing site



could quickly be assigned to Army aviation battalions and combat divisions.

In support of Army air-delivered operations, pathfinders operate electronic and visual navigation aids which guide pilots to desired delivery areas, furnish information and control to pilots by means of ground-to-air radio, reconnoiter proposed delivery areas, including radiological reconnaissance and survey of areas after nuclear weapons have been employed, and assist in the initial assembly of troops, equipment, and supplies.

#### Tested techniques

The techniques employed have been developed and tested by Army pathfinders and pilots at The U. S. Army Infantry School. The system formerly employed with troop carrier aircraft and gliders and the field landing methods taught Army aviators were used in the development of these techniques, aimed at furnishing adequate assistance to pilots, with the minimum of simple, portable aids, in the minimum amount of time.

Pathfinders should get on the ground in time to establish equipment and look over the lay of the land. Sometimes, however, advance arrival of the pathfinder team would so compromise secrecy as to make it impractical. In such cases, the pathfinders would come in with lead elements and then assist subsequent aircraft deliveries. The pathfinder's ability to be transported by any means from foot patrol to parachute gives him a tremendous flexibility of delivery and ensures maximum speed and secrecy.

In a hypothetical operation, pathfinders "go over the top" well ahead of the main body, crossing the lines as atomic missiles soften up enemy targets thirty miles farther on.

Reaching their objective the copters fan out and hover fifty feet above their assigned landing points while pathfinders check for radiation with their portable RADIAC (radioactivity detection, identification and computation) sets. The radiation count reported to headquarters by radio, the word comes back, "Proceed with plan." The helicopters unload the pathfinders and their equipment and take off immediately. In a few minutes the pathfinder crews have picked out and marked exact release points and landing sites; set up ground and ground-to-air radio communications nets; and taken local security precautions. Five minutes before the arrival of the lead elements of the main body all is in readiness for them.

The inbound serials of troop-carrying helicopters fly in to land at marked and lighted sites, unload rapidly and take off to make room for other copters arriving minutes later. The operation goes off with clockwork precision, smoothly handled by the pathfinder personnel. There is little or no blundering about in the dark. The troops are guided to assembly sites and then move out on their assigned missions. The speed, safety and exactitude of the landing operation have contributed toward successful surprise in the action, and within a few hours the objectives are taken and the mission of the pathfinders more than accomplished.

The operation described here has been conducted at Fort Benning. It is an example of the swift and flexible day and night transportation of which Army aircraft are capable—when they have the proper assistance. Every commander must be prepared to employ battlefield air transport but using it may be somewhat complicated without the aid of the advance party of the future—pathfinders.

# PHANTOM Passes the Word

Captain Howard L. Sargent



*Command liaison groups can "scavenge" essential information for commanders*

**T**HE 7th Naval Beach Battalion suspended landings on its clogged portion of Omaha Beach at 0830 on D-day to allow clearance of beach exits. The army, corps and division commanders offshore were not informed of this. In fact, messages to the *Augusta* and the *Ancon* were giving an incoherent account of the chaos on the beach to Generals Bradley, Gerow and Huebner. In this situation Colonel Benjamin B. Talley earned a DSC by battlefield reporting. Commandeering a DUKW and cruising from five hundred to a thousand yards offshore, he described the confused scene by radio to the *Ancon*.

His vivid blow-by-blow narration of landing craft milling offshore like cattle and the descriptions reported by two officers General Bradley had sent to the beach were too limited in scope to be of significant value to the high commanders. The impromptu reportings were, however, beacons of light in a muddled situation which caused General Bradley to suffer "fears that are spun out of silence." Gordon A. Harrison, after examination of battle records of both sides, stated in *Cross-Channel Attack* that both the German and American high commanders were in a fog on D-day because of lack of knowledge. "In view of the lack of information received by senior commanders on D-Day it is possibly fortunate that the seriously considered tactic of holding back a large portion of the attacking force was not attempted," Harrison reported. "The army commander did not know where the soft spots were, what beach exits were being cleared the fastest," he added.

Since World War II, concentrated effort has been placed on perfecting mechanical aids like radio and

even battlefield television. Unfortunately, technical improvements are not likely to produce all the results desired. Primarily, the fog of war is the result of human, not mechanical, failure.

Several months prior to D-day it was proposed that complete telephonic, telegraphic, and radio communications be provided between forward units and the Supreme Commander so that he could be in closest touch with the battle and could intervene quickly if the necessity arose. The proposal was adopted and possibly the most complex military field communications system up to that time was installed. Yet "only fragmentary reports of the landing drifted back to SHAEF advanced headquarters at Portsmouth, where the Supreme Commander fretted for lack of news," the army's official history of SHAEF reports.

Moral: *Communications equipment* is not synonymous with *to communicate*.

How then can we assure that senior commanders are fully informed in time? The story of Colonel Talley gives a hint. Battlefield reporting by individuals not charged with execution of a battle plan is a concept which should be further examined. For the purpose of discussion let's call this type of reporting "command liaison," and define it as the acquisition from all available sources, and immediate transmittal outside normal command channels to corps, army and higher commanders, of relevant battle information—both confirmed and unconfirmed—with the goal of depicting current events and trends and intended actions of friendly commanders.

## Scavengers of information

How can we effect command liaison? Fortunately, historical examples exist. The British in World War II organized a "GHQ Liaison Regiment" called "Phantom." This regiment was organized on the basis of one small squadron for each field army, with each squadron

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having a dozen or more patrols to cover divisions and occasionally as low as brigades and reconnaissance units. The patrols did little direct reconnaissance work. They scavenged information other units had collected.

Phantom maintained two adjoining situation maps at the headquarters it serviced. Intercepted and other suspect information flowed onto an "unconfirmed" map, while more reliable information like that obtained from senior staff officers, was posted on a "confirmed" map. The two maps were entirely separate from those maintained by the headquarters.

Diligent training of both the liaison officers and technicians resulted in a far-above-average ability to receive, edit and retransmit large numbers of messages. In one day in Northwest Africa, 472 messages were intercepted by one Phantom unit. Of these, 272 were edited and retransmitted to higher headquarters for posting on unconfirmed maps. Phantom made mistakes early in the game. In Northwest Africa, friendly messages received in the clear were retransmitted in the clear until it was realized that the Germans were being given two chances to intercept. That this was a serious error is shown by the remarks of General von Mellenthin in *Panzer Battles*. Nine days before the start of the great counterattack by Rommel that ended five months and five hundred miles later at El Alamein, von Mellenthin briefed Rommel: "Thanks to the excellent work of our Wireless [radio] Intercept Company I was able to give a fairly clear picture of the British situation and dispositions, and to draw attention to the opportunity of delivering an effective counterstroke." In the four-day attack of 21-24 January 1942, "the British columns fled madly over the desert in one of the most extraordinary routs of the war. . . . These operations decided the campaign in Western Cyrenaica."

Later, all Phantom messages were encoded, but the case for Phantom had been a close one. Senior commanders were blaming the liaison service for leaks that, in retrospect, were more probably the result of poor signal security by all units.

#### How Ike got the word

A Phantom patrol appears in Captain Harry Butcher's diary: "Patton had taken command yesterday [1 August 1944] and it was obvious that he had plunged ahead against little or no resistance. Later I learned that the arrow denoting the location of a Phantom recon [reconnaissance] team showed we reached Rennes twelve hours ago which to me sounds very much like Patton has not only taken command but has characteristically taken advantage of the situation." Butcher later remarked: "Just before lunch I met Ike in the hall. He was all smiles. 'If the intercepts are right we are to hell and gone in Brittany and slicing 'em up in Normandy,' he said."

Notice that the Supreme Commander was getting his information within hours and from intercepts, not through command channels. This situation existed two

months after D-day despite his elaborate communications system.

A slightly different solution than command liaison has been suggested for reconnaissance units. Lt. Col. Harry W. Candler, in his history of the 91st Reconnaissance Squadron in Tunisia, proposes the addition of a second officer to each reconnaissance platoon in order to free the platoon leader who "can search continuously for enemy positions and installations and continue to make his reports, while his platoon has become engaged." The principle proposed is excellent. A man cannot report back information and maneuver a unit at the same time. However, the output of such an arrangement, whether it is used at platoon or up to corps level, is apt to be uneven in usefulness. Just when the information they are sending back is most helpful—during a hot engagement—the reporters are likely to stop transmitting information to perform some other task that seems to them or their immediate commanders to have a higher priority. It seems quite clear that for uniformity of output, battlefield reporters must work for a commander who has been given the primary mission of collecting and disseminating information. A command liaison unit completely outside the chain of command can furnish this service. Such a liaison unit must work directly under the highest commander desiring the service.

#### 'Spying' inspectors or official reporters?

As you may have concluded, the biggest objection by subordinate commanders to establishing command liaison is the old bugaboo of "spying" and usurpation of command prerogatives. Command liaison patrols would appear as inspectors to some commanders, subjecting their commands to uncensored and possibly biased reporting by relatively junior officers. Such conditions have been known to cause difficulties. The problem can be greatly minimized by selecting and training command liaison officers. The officers selected will have to be amateur psychologists as well as good reporters. Phantom solved a large part of the problem by citing the source of each message, which in the case of most confirmed messages was a staff officer of the headquarters with which the patrol was working. Most British and American commanders became sold on command liaison in World War II when it was the only reliable source of information at critical times.

After the Northwest Africa campaign the U. S. Army recognized the value of Phantom-type units, and in Europe organized SIAM (Signal Information and Monitoring) units. Phantom also went to Italy, and by the time of the Normandy invasion had been increased to two regiments. Because of their combat experience and long years of training—which American units lacked—Phantom was used by the Americans in northwestern Europe, but down only to corps level. Every British and Canadian unit, "down to and including division was covered, patrols going down to brigade level where necessary."



General Walter B. Smith, Eisenhower's Chief of Staff, called a conference on D plus 1 or 2—and the record is not clear—to discuss the acceptability of Phantom patrols by the various American headquarters. Apparently several high-ranking Americans had asked, "What the hell are you doing here?" or its equivalent, of British liaison officers appearing at their CPs after the landings. It is not too difficult to surmise that feelings were running high in some instances. It was agreed that Phantom would remain at the American headquarters, but that they would eventually be replaced by American units.

#### American Phantoms

Phantom headquarters subsequently trained American personnel at Bournemouth in England, but such high-performance training could not be accomplished quickly (the British had four years' experience) and it was not until VE-day that the American units became operational. Meanwhile, absorption of American personnel into Phantom units commenced soon after General Smith's conference and probably aided in eventual acceptance of the patrols by some initially suspicious American generals.

#### How Phantom operated

Let us now turn from the history of command liaison to an examination of its missions, characteristics, and organization.

The missions of Phantom changed considerably from the initial functions assigned. By August 1944 the Canadian First Army gave the following operations order to its Phantom unit:

1. OPS. General information on progress down to battalion level. Intentions—change of plans.
2. INT. Identifications and re-identifications *ad nauseam*. Gossip of the enemy.
3. AIR. Line for forward troops, or estimate ditto by any and every means.
4. R.E. Constant bridge information.
5. R.A.F. INT. Information on enemy air.
6. S.D. Headquarters of own troops down to battalions.
7. A.Q. Road surface or traffic news.

A modern commander may substitute an item such as "CBR WAR. Blast: size, type, location. Fallout: Location of current 50 roentgen contour line."

Characteristics of command liaison units and personnel, which were the real reason for the great success and regard enjoyed by the units in World War II, might be summarized, after slight modification for modern war, as follows:

- ☛ Carefully selected radio technicians, cryptographers, liaison officers and maintenance personnel trained to work as interchangeable members of a team and meet extremely high levels of performance.
- ☛ Complete mobility and air transportability; some patrols trained as paratroopers.

- ☛ Capability of remaining fully operational at all times, even during moves (by leapfrogging), and for long periods under adverse conditions.
- ☛ Radios and auxiliary equipment (especially antennas) rigged to gain the best possible reception and transmission despite jamming.
- ☛ Divorcement from non-liaison missions.

If the Army forms a command liaison unit—and battle experience indicates such an action is defensible from an economy of force viewpoint—certain decisions will have to be made. Will it be Active Army, Army Reserve or National Guard? How large? and so forth. Because of the need for long years of training to perfect command liaison techniques, the Active Army with its high turnover rate should be used only as a training ground to provide an immediate force in being. The Army Reserve or, preferably, the National Guard, should constitute the larger portion of a command liaison unit. Possibly a National Guard regiment of three 280-man battalions could be formed with about eighteen patrols in each battalion.

One battalion of the regiment, composed of non-regulars from the area of the home regiment, would be on active duty overseas. An alternative would be to keep the active-service battalion home and fly it to Stateside and overseas maneuvers or areas in which hostilities were imminent or had erupted. The other battalions could follow a few days later if needed.

The National Guard portion of the regiment could absorb persons discharged from the active-service battalion and desiring Guard duty. An Army Reserve unit under regimental supervision could absorb men discharged who do not desire active Guard duty. Possibly the active Guard would be a source of men for the active-service battalion. Other approaches are possible, of course, but the principle of a National Guard regiment with one of its battalions on active service should produce in time an extremely high level of competence and *esprit de corps* in the entire regiment. And what state would dislike being represented by patrols in all high Army and Allied Forces command posts in a war?

Much more could be written and historical examples cited concerning the desirability of having professional battlefield reporters. Possibly the argument that they are needed will be summarily rejected. But it should be kept in mind that our supposed superiority in atomic warfare has never been put to the test of combat. If, within a few years, we suddenly find comparably sized Communist units have equal or superior fire power to ours, what then? The answer is that we cannot fail to counteract this distinct possibility. We must become extremely efficient in employing our combat resources in an age where atomic target acquisition is supposed to precede detonation by minutes—not hours or days. One way to do this, as I have attempted to show, is to dispel the blinding and killing fog of the battlefield and allow our commanders of inferior forces, by the then possible superior maneuvering, to emerge victorious.



Around the young MP we found lying wounded on the floor of the hut were the dead bodies of three North Korean soldiers

# ENCOUNTER AT AKTONG-NI

*An artillery outfit's baptism of fire  
created in it the confidence and pride  
that make a superior fighting unit*

## COLONEL GEORGE PATRICK WELCH

**S**PLASHING through the tidal mud of Inchon, Korea, we scrambled ashore in the mid-morning of 20 September 1950.

"We" were the thirty-four officers, the six hundred and twenty-four enlisted men, and the five hundred "attached" Korean conscripts who together made up the manpower of the 31st Field Artillery Battalion, 7th Infantry Division, United States Army. I was the battalion commander.

The Korean war, as had others, caught the American people in the midst of economy cutbacks. The occupation forces in Japan were at skeleton strength. They had to be built up by what was available in the United States.

As a result, over three hundred of my Americans were men fresh from basic training, without combat experience. Yet they were here to fight.

A trained battalion of field artillery is an exquisitely coordinated team of specialists. But my battalion was not trained in any such sense. I had over eleven hundred men, but I did not have a team.

It was my job to create one out of eleven hundred men, five hundred of whom spoke a foreign tongue and were innocent of both the rudiments of discipline and sanitary standards. What was more I had to create it fast.

I knew I had no more than forty-eight hours to work a miracle. By that time our eighteen medium howitzers, our tractors, our trucks and jeeps, our radios and a thousand other heavy items would be landed

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**Colonel George Patrick Welch, USA, Retired**, who lives in Palm Beach, Florida, is a former Deputy Chief of Information, Department of the Army. He wrote "The Army's Press Relations" (September 1956) and "The First Battle of Britain" (March and April 1957).



Kim's arm swung west, then north. "Communist soldiers, two hundred, maybe three"

from the cargo ships. Once our equipment was in hand and checked, we would be "operational." The Division had work for us to do, down south near Suwon, forty miles away, under an urgency that could recognize no delay or excuse.

Inside of forty-eight hours a spiritual something had to be created, a something that in officers and men alike would awaken mutual respect, engender confidence and trust, instill a conviction of the battalion's invincibility, a something that from these basics would flow gently, even imperceptibly, into a quiet professional pride of unit quite inadequately called high morale.

We moved out of Inchon into a bivouac area. I fell asleep about three in the morning, after hours of irritated despair as trigger-happy youths for miles around fired nervously and enthusiastically at fancied enemies populating the star-studded moonlit sky. I could not then know that before coming day gave way again to night my problems would be solved for me by a combination of luck and the gallant courage of seventeen Americans, most of them boys who had never before seen war.

**A** CAREFUL check at dawn showed no casualties from the night's exuberance. Along with the relief of this knowledge came the first of our equipment, an assortment of jeeps and trucks. Earlier than I had hoped, we had mobility for a much needed road reconnaissance to the south.

Two hours later, I moved out of the bivouac area with the reconnaissance party. We had five jeeps and a three-quarter-ton, the latter carrying a caliber .50 machine gun. We were eighteen men in all, armed with carbines and automatic pistols. We had C rations for a day. My object was to check the roads my full battalion would have to travel on the morrow, absorbing two miles of critical road space.

The main highway south was jammed with long truck columns moving slowly between single files of plodding infantrymen. Riding in the lead jeep, I settled down to the dust and the heat, checking our progress from my map against the speedometer. We were making about seven miles per hour.

This would never do. If possible, I had to find another road for my battalion to move south. My map showed a junction eighteen miles to the south. Into this junction from the west, toward the Yellow Sea, a road led, which meandered toward the coast, then turned north and finally got back to Inchon. I decided to turn there and trace the road backward, to see if its roadbed and bridges would carry my heavy equipment.

It was noon when we came to the junction. The MP detachment controlling traffic was cooperative but uninformed. Had any Army traffic come in from the west? No, sir, they had seen none. There were rumors of an MP patrol starting down some coastal



road from Inchon. Maybe this was the one. My map agreed.

Had the patrol showed up yet? No, sir, nothing's come from over that-a-way. We started west.

Out of sight and sound of the main highway, the silence emphasized the loneliness of our little force. Small hills began to break up the rice paddies. As we rounded one we came upon a small Korean village. A shout went up when we were seen. The villagers—perhaps one hundred folk of both sexes and all ages—surrounded us, cheering and shouting. I beckoned to my Korean interpreter, who rode in the back seat of my jeep.



"What do they say?"

"They say, welcome very much Americans. They say freedom hurray!"

"Say we are glad too. Ask them where this road goes."

Kim spoke for three minutes. For five villagers, all speaking at once, answered. With everyone out of breath, Kim had a chance to translate.

"They say, west, then north. Maybe Inchon, maybe Seoul, maybe not sure."

This sounded normal. For what it was worth, it confirmed my map.

Kim and the villagers resumed their enthusiastic conversation. There was much pointing to the road

ahead, and more toward a fair-sized hill, almost a mountain, about three miles northwest. I found it on the map by its contours and noted that our road swung around its western slope before turning north. Just at the foot of the mountain the map showed a village.

Let's call it Aktong-ni, since I have forgotten its real name.

The oratory ceased. I looked up. Kim was looking at me. The Oriental calm of his features registered pure consternation.

"They say 'Communist soldiers!'"

"Communist soldiers? Where?"

His arm swung west to the road ahead, then north.

"Around mountain. Here this morning. Steal food. Beat up farmer."

"How many?"

Another long burst of oratory, with the whole village shouting at once.

"They say maybe two hundred. Maybe three."

I guessed that meant not more than fifty.

"Where were they going?"

There seemed to be different opinions, all vociferous. Even Kim seemed confused.

"Some say they go Inchon, drive American capitalist pigs into sea. Some say they defend road. Some say maybe Communists separate, bury guns, steal clothes, make like democracy farmers. Not sure."

**M**Y officers and men had gathered around, silent, and watchful. I sat there thinking while my men waited and the villagers beamed.

My self-imposed mission was a road reconnaissance, not a combat patrol. We were under no compulsion to seek contact with the enemy. In fact, I could make a sound case for avoiding it.

I tried to put myself in the mental attitude of the enemy—always a dangerous, if sometimes profitable exercise. If they existed they were rear-area troops, always more susceptible to rumor and panic than front-line fighters, who believe what they see. They would be out of communication with their higher command, uncertain and bewildered. All they could know, seeing the Division moving south from their rear, was that major disaster had occurred.

If I kept on, their preconceived notions of Yankee capitalists would not permit them to believe that seventeen millionaires would be crazy enough to attack without close support. It would follow that they would see in my little group the wily spearhead of an overwhelming force ready to wipe them out if our apparent weakness tricked them into bravery. Also, if in fact they were only about fifty, the odds were not insuperable—three to one.

All this was surmise. However cogent, it could not be determinant. What was decisive was my requirement to stage a miracle.

Every unit takes temper from the Old Man. If, however good my reasons, I turned back here, the word would get around. Later I might demand, but

My men scouted the position  
from one end to another



could not expect, my officers and men to show daring, to cultivate what the Army calls "combative instinct," if I failed to do so myself. Establishing their faith in my leadership was an essential part of the miracle involved in making a team, in giving the battalion a soul.

I looked around at the eager, carefully noncommittal faces. There were only two I knew, and who knew me, from long association in Hokkaido. The others were all newly joined.

"You've all heard the conversation. The villagers say there are Communists ahead of us on the road. They will be bewildered. They will think a regiment is behind us—" listening to my voice I was surprised at its easy quiet confidence—"we shall add to their confusion if we catch up with them. Every man check his weapons and be sure they are loaded and ready. If we meet them, be sure to obey my orders. That's all. Hurry!"

Every face broke into a delighted grin as I talked. There was a scramble to reload on the vehicles. I sent one jeep carrying two of my experienced officers one hundred yards ahead. I followed with the three-quarter directly behind. This arrangement allowed me control of our most powerful weapon.

The villagers cheered as we started off. Ahead of me the point jeep disappeared around a bend. I loaded my own carbine with a full clip and tested the bolt action. I was nervous. Most of these nice kids behind me had never been shot at before. I know I

should have been thinking great thoughts—like Nelson's instructions before Trafalgar: "If in doubt, no captain can go wrong who lays his ship alongside an enemy"—but in fact I was worried for these cheerful friendly American boys whose upbringing whether on farm or city could not have prepared them for the thought that someone might try very hard to kill them.

**T**HE mountain loomed large on our right. Ahead the road disappeared behind its sloping base. Behind me the three-quarter shifted gears against the grade. The high-pitched whine shrieked in the still air. The point jeep rattled around the bend and out of sight.

My own jeep came to the bend. To our left and below the road, rice paddies, lush with yellow, ripened grain, stretched about a mile to the next hill range west. On my right a steep gravel bank, from which the road had been cut, obscured the mountain.

Fifty yards ahead the point jeep was stopped. The two officers and the driver were leaping out, carbines in hand.

Two hundred yards ahead the road ascended steeply into a narrow defile. From this defile men in the dark-green uniform of the North Korean Army were spilling down the hillside, running and leaping for the shelter of the rice paddies. I was out of my own jeep before it stopped and gestured to the next jeep in line to cover our right flank up the gravel bank. The officer nodded his understanding and started up, his men



cheerfully following. By this time, the enemy, possibly one hundred, were running diagonally away from us across the rice paddy. I looked up at the soldier on the machine gun. He was gazing around fascinated, but doing nothing.

"What are you waiting for, son?" I yelled. "Open fire!"

He looked at me as if the thought that his weapon had been designed and put in his hands in order to inflict injury on the enemy of the Republic had never occurred to him.

"You mean, sir," he was goggle-eyed, "shoot at them?"

"Indeed I do," I answered, "and in a hurry."

All our men were now firing at the retreating enemy. Soon they were out of carbine range with only sporadic bursts from the machine gun to give strength to their legs. I called off all small-arms fire and sent parties to check the village and the defile.

**B**Y the sheer panic of our arrival from the rear the enemy had deserted a well-organized road block, facing north, and heavily supplied with machine guns and other weapons. My men scouted it from end to end, carbines at the ready, unwilling to believe soldiers would have deserted so strong a position in the face of our tiny force. But it was true.

And lying on the floor of a house in the village, bleeding slowly from a chest wound, we found a young MP, weak, but clutching a .45 automatic pistol in his hand. Around him at the doors to the room where he had taken refuge lay the bodies of three North Korean soldiers who had followed him. They were all dead. Later we found his motorcycle on the road. Him we tenderly carried out and made as comfortable as possible on the floor of the three-quarter.

I rounded up our men. Nobody had suffered even a scratch. We destroyed the enemy weapons we could not carry. I thought I had discouraged the taking of souvenirs, but for months after I was finding Soviet-made rifles and bayonets picked up that day, in the troop baggage.

It was getting on to late afternoon. I had lost my enthusiasm for the still unknown road ahead. Besides, I had achieved my basic purpose and had a wounded American soldier to get as quickly as might be to a hospital. I gave orders to turn the vehicles. I did not have to speak twice. We started back the way we had come, held down to a slow pace by the wounded MP.

We got an enthusiastic, cheering reception as we passed back through the Korean village without stopping. We delivered the wounded man to a regimental hospital at Anyang-ni and started back to Inchon. It was almost dark.

At Division I left the convoy to report in to my superior. The others went ahead to the bivouac area. I drove up about two hours later, after dark. I no sooner arrived at the gate than I knew the miracle I had sought had happened.

There was a sentry at the gate who saluted more smartly than I had seen in some time. But beside the sentry, drawn up in a rigid line, were my adjutant and sergeant major, accompanied by a half-dozen soldiers, all frozen in a salute broken only by smiling faces.

"Good evening, SIR!" It was a chorus. I saluted and drove through the gate. A little while later the adjutant and the sergeant major joined me.

**T**HERE is not much gossip a commander misses if the sergeant major is willing to share his knowledge of undercurrents with the boss. His reports on the excited accounts given by the men on their return to their batteries exceeded my expectations; indeed, in some respects exceeded the facts.

Carefully I gave instructions that each of the officers and men who had been with me would be recommended for the Bronze Star, knowing well enough the word would be over the entire battalion in minutes.

But it was the next morning that the evidence really piled up. The first inkling was my orderly bringing me coffee that was really hot, a wholly novel experience with that loitering young man. The next was the large number of men who stepped out of their way to salute me as I walked through the area. Invariably the salutes were accompanied by an earnest "Good morning, sir!" My arm grew tired as my spirits soared.

But the payoff came when the sergeant major caught up with me later in the morning.

"Sir, would you like to see the waiting list?"

"What waiting list, sergeant?"

"The list of volunteers for your next reconnaissance, sir."

I looked him dead in the eye.

"Are you kidding me, sergeant?"

He managed to look hurt, which, for a veteran of his ripe vintage was quite an achievement.

"No, sir. No indeed. Since reveille three hundred and eighteen men volunteered for your patrols. If I thought the Colonel would let me get away with it, sir, I could sell tickets."

"Hmmp!" was all I could manage as I turned away. It does not do to let hardened combat veterans see you with tears in your eyes. But this I knew: whatever might come to us in the dark days ahead, I did not need to fear for this command.

There was much still to be done. Merciless practice and everlasting training must continue night and day, in the midst of combat operations to make this battalion efficient.

But the essential first requirement had been met. A spirit existed, born of an encounter that was hardly a fight, and indeed, save for the wounded MP, almost an anticlimax. Yet, anticlimax or not, it had served as a necessary stimulus to create the will and the confidence, the pride in self and in unit that must come into being and grow into a faith before combat efficiency has a chance to develop.

# PENTOMIC COUNTERFIRE METHODS

*Fleeting "one-shot" targets will require prediction rather than detection, and fast action by the FSCC in processing information*

**LIEUTENANT STANLEY C. HOKANSON**

**N**OW that the Pentomic concept has brought about drastic revision of our organization and tactics, isn't it time we took a closer look at our counterbattery and countermortar fire procedures? Under the old system, counterbattery operations were directed by the corps artillery S2. In producing counterbattery data these charts and records were used: counterbattery information form; counterbattery intelligence map; hostile battery chart; suspect battery overlay; shelrep (shell report) overlay; hostile battery list; hostile battery file. Besides these, a roving-gun location overlay was maintained if required.

Here's how the system worked. The forward observer sent shelreps or crater analyses to his S2. These were recorded on the counterbattery information form and plotted on the shelrep overlay, using back azimuth from the observer who made the report. The plot was then checked against the suspect battery overlay, and if a location previously suspected was verified, it was removed from the suspect battery overlay and transferred to the hostile battery chart. The plot from the hostile battery chart could then be transferred to the counterbattery intelligence map so that information about terrain could be obtained on which to base a

recommendation to fire. The location was then placed on the hostile battery list for transmission to S3 for decision to fire, and then down to all artillery battalions. Finally, a card was prepared for the hostile battery fire, to show the complete history of the battery, including counterfire action and known results.

Division artillery S2 conducted countermortar operations by following the same principles.

## **A job for the FSCC**

These systems, while satisfactory in situations involving conventional artillery and more or less static positions, today are both cumbersome and impractical. If electronic computers have made the rapid collection of counterfire data possible, missiles and atomic warfare have made it imperative.

Because of the speed of movement and the great distances inherent in the Pentomic concept, I think the division fire support coordination center (FSCC) must be made responsible for collecting and acting on counterfire data. If division FSCC is to successfully conduct a counterfire operation, the system we now use must be drastically modified. The practice of tying up intelligence personnel in a process aimed at after-the-fact detection and location of hostile artillery is not merely a waste of valuable manpower. It could mean tactical suicide.

In a battle concept which envisions atomic and conventional artillery units "living" in carefully concealed areas and firing from numerous "one-shot" forward firing

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**Lieutenant Stanley C. Hokanson**, Artillery, entered the Army in 1951 and was with the 39th FA Battalion (3d Infantry Division) in Korea where he was commissioned. He afterward served as a sub-area S4 in Germany and is now S2, 1st Infantry Division Artillery, at Fort Riley, Kansas.

positions, we must emphasize prediction rather than detection. The very least we can settle for is on-the-spot counterfire action, to achieve which we must very rapidly locate possible hostile battery positions on the basis of order-of-battle information in our hands. The location of possible missile-launching sites and positions suitable for heavy artillery must be stressed, and FSCC must be prepared to deliver fire on these positions, once located, at the first sign of occupancy.

This means that division FSCC—a combined counterfire and target acquisition agency—must have priority over, and make maximum use of, the most modern means of battlefield surveillance, including fixed- and rotary-wing aircraft, aerial TV, infra red, and radar. Information gathered by these means must be transmitted direct to division FSCC, in order to facilitate the computation of predetermined firing data in the case of a suspected position, and as the basis for a decision to fire if the position shows signs of occupancy.

#### Fast transmission of information

Because of the speed of movement necessary and the extent of frontages to be covered, it would be impossible to process the mass of target acquisition and counterbattery information which necessarily must be fed into the division FSCC, in the manner used in a corps counterbattery action. The target acquisition and counterfire team in the Pentomic division's FSCC must be so streamlined that it operates with the least amount of paperwork consistent with accuracy. I believe only

these charts and records are enough to satisfy the accuracy requirement without overburdening the section with detail:

The intelligence operations map—to develop order-of-battle information, terrain analyses to determine the need for surveillance missions, and similar data.

The counterfire chart—to produce predetermined firing data and to conduct counterbattery fires.

The artillery counterfire information form—to serve as a worksheet and a record (see chart).

The normal section journal to record the sequence of events.

The division FSCC target acquisition and counterfire team will operate in this way. Upon being committed, FSCC assigns sectors of search for hostile heavy artillery or missile-launching sites, based on available order-of-battle data and map reconnaissance. If the battlefield scanning agencies report a positive location in a certain area, that area is kept under continued surveillance. At the first indication that the position is a possible (through presence of a survey or other party), the location is plotted and firing data prepared. Henceforth the position is kept under constant watch so that timely fire may be delivered at the first sign of occupancy.

At division artillery level, the assistant S2 (counter-mortar officer) conducts counterfire operations against light artillery and mortars besides acting as battlefield surveillance agent for division FSCC through organic radar.

ARTILLERY COUNTERFIRE INFORMATION FORM										TIME:
										TO :
										FROM:
RECEIVED BY _____ FROM _____ TIME _____ NR _____										
SECTION 1		Shelrep - Mortrep - Bomrep (Designate which)								
A	B	C	D	E	F	G	H	I	J	K
FROM	PSN OF OBSR	MAG OR GRID AZIMUTH SOUND FLASH OR FURROW	TIME FROM	TIME TO	AREA SHELLED	NO. & NATURE OF GUNS OR MORTARS	NATURE OF FIRE	NO. & TYPE SHELLS	TIME OF FLASH TO BANG	DAMAGE (REMARKS)
SECTION 2 Location of Hostile Weapon										
L	M	N	O	P	Q					
FROM & TIME	GRID REFERENCE & ACCURACY	MEANS OF LOCATING	TIME ACTIVE	NO. & TYPE OF GUNS OR MORTARS	REMARKS					
SECTION 3 Counterfire Action										
TIME C/FIRE	FIRED BY	NO. OF RDS FUZEL AND PROJECTILE	REMARKS (EFFECT)							

# THE MONTH'S READING

## Forward Supply and Austerity

LT. GEN. CARTER B. MAGRUDER  
Deputy Chief of Staff for Logistics  
Army Information Digest  
January 1958

As we approach the front, the movement of supplies will become more and more difficult. At the same time the need for movement becomes greater since the power of atomics has restored the ability of ground forces to move.

The tactics which demand dispersion of combat units may well make impracticable the establishment of any type of strong continuous line, penetration of which requires the major effort of a large force. Such a line was found necessary in both World Wars and in Korea. Without such a line, small enemy units can infiltrate far into our rear areas, blow up railroads, mine roads, destroy convoys, attack installations.

Our base sections will require a protected perimeter. Forward of the base section every unit must be prepared to fight in self-protection. With portable guided missiles or with antiaircraft automatic weapons, penetrating enemy units can bring down our low-flying cargo planes and helicopters, so we must expect to take losses.

Reliance will be placed on light cargo planes and helicopters for the movement of critical items and emergency supplies whenever required. But we must not assume that these valuable but expensive aircraft provide any basis for scattering combat units in isolated locations, with sole dependence being placed on aircraft for their routine supply.

Our overland supply convoys must be capable of cross-country movement and of fighting their way up to the units they are to supply. Combat troops in considerable numbers will be required to provide protection against large enemy units that have penetrated our rear areas; they must hunt down these units and destroy them. Armored personnel carriers and armored utility vehicles will be incorporated in our major units in great numbers by 1962 and will offer assurance that our supplies can be fought through to the combat echelons.

Following an atomic exchange in a general atomic war, we are not going to be able to deliver to the troops supplies in the tonnages to which the United States Army was accustomed in World War II. Since World War II our mechanical and electronic equipment has increased. The new word "austerity" is coming into use and needs to be emphasized more and more.

In World War II we found that troops could fight for short periods when supplied with only ammunition, food

and gasoline. Before 1962, I believe we will have cut our requirements for those three basic essentials as much as possible and added a minimum of other necessities so that tonnage of supplies required by our troops will be down within the realm of possible delivery. Following are some areas of possible reduction or addition:

**Ammunition.** Ammunition has always been our heaviest tonnage. With the minutest fraction of the weight of conventional ammunition, we can now get the same explosive effect with atomics. We will progress in making our atomic explosives smaller so that they can be fired closer to our own troops without endangering them. Very small yield atomics will replace much of the heavy tonnage of conventional ammunition.

**Food.** The Army has always had emergency rations of very small bulk but they have not been adequate to subsist men for many days. To feed troops properly, it has been necessary to deliver refrigerated meat—and refrigeration itself is a considerable tonnage item. Progress with irradiation of food indicates that by 1962 we will be able to dispose of refrigeration in forward areas in a combat theater. We will be able to provide irradiated and dehydrated foods which need only water and heat to provide a diet which is not only nutritionally good but comparable to fresh foods in taste. As a result, troops will be better fed; and we can make combat soldiers out of the cooks and kitchen police.

**POL.** By 1962 essentially all of the Army's heavy engines should be compression-ignition engines. These will offer the economy of the Diesel engine, yet will have the ability to utilize gasoline and heavier fuels, including captured enemy stocks. The installation of these engines, plus the general reduction that we must accomplish in tonnage of cargo to be moved, promises great reductions in the tonnage of POL that must be delivered into the forward areas.

**Engineer Materials.** Next in the list of heavy tonnages are engineer materials, with perhaps the heaviest requirement for items used in construction of airfields. Cow pastures and division air strips do not require much construction material. We must learn by 1962 to operate from such airfields.

**Class II and IV Supplies.** The replacement of worn-out or damaged end-items is a major tonnage requirement. We must expect that equipment which breaks down in movement and is left behind in an unprotected rear area may be destroyed by enemy patrols; moreover, working parties endeavoring to salvage such equipment may well be attacked. Transportation difficulties are going to make it uneconomical for us to evacuate heavy equipment to the rear.

The ease with which major manufacturing facilities can



be destroyed would render doubtful the desirability of maintaining rebuild shops in an overseas theater. Rebuild of equipment is a peacetime operation. In future war it will probably be confined to the most critical equipment—for tanks, perhaps yes; for general purpose vehicles, no. This means it is important that our equipment not break down, or if it does, that it can be readily repaired by semi-skilled mechanics in a relatively short time. We are devoting efforts to increasing the reliability of our equipment.

In his studies for the Department of Defense on possible methods of retaining qualified technicians in military service, Mr. Ralph J. Cordiner, President of General Electric, concluded that all possible steps should be taken to reduce the number of technicians that must be retained. He proposed that contracts be let with industry to make complicated equipment easier to operate and easier to maintain and thus reduce our requirements for technicians.

By 1962 it may reasonably be expected that we will have progressed far in increasing reliability and in simplifying maintenance so that less equipment breaks down and that which does break down can be rapidly repaired.

In addition to improving reliability and increasing the simplicity of our equipment, we will have reduced and simplified our repair parts supply. We are attacking this problem by selective stockage in forward depots of only fast-moving, critically needed repair parts. Cannibalization by our reclamation and classification units will provide any other parts that may be required. This will permit a reduction of repair parts in forward echelons to about 20 percent of those formerly carried.

## Forgive Them Their Absurdities

MAJOR GENERAL J. F. C. FULLER  
*The Last of the Gentlemen's Wars*  
Faber & Faber, 1937

I can recall a frightful fuss over our first parade. We did or we did not trail arms in the march past, and the General objected. It was apparently a point of immense importance. I also remember the whole regiment drawn up on the Queen's Parade. The Colonel sat on a fat cob called Peter, fifty yards in front of the line. He bellowed in a stentorian voice: "From the left—prepare to meet cavalry! Up number one, back number eight!" We did it beautifully, for we and our forefathers had been practising it for eighty-four years. What in war was to become of the Colonel sandwiched in between volleys and onrushing lancers never entered our heads nor his, and whether our enemy, whom we were to meet in a few weeks' time, and who carried neither lance nor sword, would or would not charge us, like Crusading knights, never troubled us for a moment.

It was not the individual who was at fault, but the system, which had absorbed all individuals and had moulded them into soldiers of the Brown Bess, or flintlock, type. . . . It never considered what the enemy might or might not do: he must attack us or we must attack him. It looked upon fighting as the sum and not the product of the weapons used. It was rigidly formal, rigidly conventional and rigidly exact. To doubt the doctrine of

the 1896 Drill Book, with its columns and its echelons and its squares, would have been heretical. So it happened that we were unthinking believers in a system which was nearly a hundred years out of date. When this is realized, I feel we ought to be charitably disposed towards those gallant gentlemen who led us from one tactical absurdity into another; for they had been schooled in a system which was absurdity itself.

## An Adequate Pecuniary Emolument

GENERAL JACOB BROWN  
Letter to the  
Hon. James Barbour, Secretary of War  
17 November 1825

I would also take the liberty of referring you to my letter to the Secretary of War of December last, containing certain propositions for the advancement of the non-commissioned grades in the Army. I have recommended that the monthly pay of the sergeant major and quartermaster sergeant of each regiment, and that of the first sergeant of each company, be increased to fifteen dollars, and that the monthly pay of every other sergeant be increased to ten dollars. . . .

The commissioned officer finds his reward in the honor which clothes his profession, in a refined spirit of chivalry congenial with its character, and in that ready passport to the highest circles of society guaranteed to him by his commission. But there are no incentives like those to operate upon the noncommissioned grades. While from their exertions, not less than those of the commissioned, will result the moral and physical efficiency of the rank and file. Indeed, there is no individual of a company, scarcely excepting the captain himself, on whom more depends for its discipline, police, instruction and general well being, than on the first sergeant. This is a grade replete with cares and with responsibility. Its duties place its incumbent in constant and direct contact with the men, exercising over them an influence the more powerful as it is immediate and personal; and all experience demonstrates that the condition of every company will improve or deteriorate nearly in proportion to the ability and worth of its first sergeant.

By securing talent and intelligence, therefore, for the noncommissioned grades, the general mass of the Army may be improved, and these qualities can be procured only by offering an adequate inducement to persons of proper character in civil life who would find in this inducement an object to enter the military; or else by stimulating the ambition of the rank and file to qualify themselves for stations now rendered more respectable on account of the additional value with which they will have been invested by the measure I propose.

If, in a country like ours, it shall be considered most wise to maintain in time of peace the small military establishment which is now authorized, I trust there is good cause to believe that the people will see and feel the importance of making that establishment as perfect as might be expected from the unequalled materials on which the nation has to draw.

# THE MONTH'S CEREBRATIONS

## START 'EM OFF RIGHT

SFC BERNARD C. ACKLEY

Far too many times I have talked to young (and some not so young) recruits who were disappointed at the lack of military atmosphere while being introduced to the service. About all most of them appear to have received is something like "... on behalf of the Commanding General, who unfortunately couldn't be here himself..." and so on. The new soldier is informed that his post has a wealth of activities available to him: snack bars, PXs, movies, the library, bowling alleys. "We even have a craft shop for you to use during off duty time." And if some old mean sergeant gives you a hard time, the Inspector General's office is located in Building 999. The chaplain is always ready to guide and comfort you.

The story is the same at almost all posts. What an introduction to military life!

Most recruits come prepared for the worst. But what do they get? A nice hot meal and a bus ride; and everything is swell, and how are you men doing? Anything we can help you with?

This is fine for the recruit, but what does it do to the Army? Will the kid-glove treatment prepare the new man for the demands that will be made on his mind and body? Is this all he gets? Just a speech and a little map of the post? Is this starting him off right? Does this prepare him for his training? Does this prepare him, mentally and physically, to absorb the skills and the knowledge that we want to impart to him?

Nowadays a new man gets that little welcoming speech and, after some preliminaries, his first Army haircut. Then he is thrust into the company of a couple of hundred of his equally shorn fellows and marched off to the unit that will give him his basic training. There the recruit follows a routine not calculated to imbue him with

a desire to learn. Bang-bang-bang! Clothing issue, shots; this here is your home now, treat it like one; them there are butt cans, use 'em! This is how you make a bed; what's the matter with ya, soldier, dontcha know how to wear a uniform? One bewildering and amazing event right after another; herded here, pushed there. It has to be done that way, because our present system does not fully recognize that a soldier is making an adjustment during his first few weeks in the Army as well as trying to learn the subjects required by the ATP. I think we would get more from our basics if we started 'em off differently.

From the moment a man enters the Army he should be completely severed from all connections with his former life for two weeks. From the very first he must be shown by any means that are effective that now he is a soldier. His allegiance, his life, if necessary, belong to the Army. He is no longer Mr. John Ducrot of Podunk, but Private John Ducrot, U. S. Army. Starting with that first haircut and that first clothing issue he must understand that a different type of thinking, a different code of conduct is required of him; that a soldier is *not* the master of his own destiny and that he is now a member (an untrained one) of the world's finest fighting force. He must understand that he will be required to attain a certain standard in all phases of military activity and the skills he

must have; that he must obey all orders without question. In other words, he must shed all undesirable traits, methods of doing things, thinking attitudes and so on, that he brought with him, for he is no longer a civilian but an American soldier.

To best accomplish the mental and physical readying of the soldier to accept and absorb training, I visualize two weeks of isolation or quarantine, where the recruit is completely separated from all outside activities that do not in some way further his adjustment or prepare him for his training. By such activities I mean libraries, snack bars, movies, PXs (except for toilet articles), service clubs, visiting privileges for family and friends. This initial quarantine must not be a picnic. There, in a strict and military atmosphere, the recruit begins his indoctrination and introduction to Army life under *seasoned* and *intelligent* NCOs, —no officers, except doctors. Here he would also receive instruction in only those subjects that start him off right: how to keep himself and his quarters clean and military-appearing, military courtesy, care of clothing and equipment, school of the soldier without arms, and—in as dramatic a fashion as possible—the traditions and achievements of the U. S. Army. Physical training can be stressed during this time and would consist of everything from the simplest coordination exercises to weight-lifting. But, most important perhaps, he will learn to live with other men in a group. He will learn that the Army puts the good of the whole over that of the individual; that now he is a member of a team and a soldier. Matters of discipline and strict adherence to a required standard should be rigidly enforced. The slightest deviation from the accepted and desired standard will not be tolerated and will be brought to his attention immediately. Speed in carrying out orders and in moving from place to place (in double time) should be SOP.

This department is designed to accommodate the short, pithy and good humored expression of ideas—radical and reactionary, new and old. We pay for all contributions published but you deserve to be put on notice that the rate of payment depends upon the originality of the subject and the quality of writing rather than length. This department is hungry for contributions, so shoot that good idea in ... today.

This is not a detailed or very comprehensive description of the program but it does show the need. I believe this initial isolation or quarantine period will accomplish its mission, and will benefit both Army and recruit.

It will prepare him for his future training. He will learn, in his first, hard introduction, there is no excuse for failure caused by not trying; that he is not just a soldier, but a member of a fighting team; and that he must

mentally and physically condition himself to meet the demands that will be made of him as a soldier.

This program will allow us to spot the "undesirables" who plague every basic training company. It will allow the medical people to spot men who do not meet minimum physical standards.

When the soldier leaves this isolation camp to begin basic training, he will be ready physically and mentally,

with a good foundation of discipline and a sense of what is required of him. He will be able to absorb his training without the added burden of having to make a difficult adjustment.

**SFC Bernard C. Ackley** was instructor in an armor training regiment at Fort Knox before being ordered to SETAF in Italy. He was with the 158th Infantry during World War II and with the 38th Infantry in Korea.

## EXTRA EYES FOR PATROLS

### CAPT. HENRY W. RAWLINGS

I am convinced that the infantry rifle company needs a camera of the Polaroid type that is rugged enough to withstand combat usage. This camera is so simple that any soldier can operate it without special training, and is small enough to be easily carried on patrols.

Such a camera could be profitably used in many ways by a rifle company commander. It seems logical to assume that in any future war rifle companies or small combined-arms task forces will have to operate independently, or at much greater distances from neighboring units than formerly. Presupposing this, the company commander will have to collect his own intelligence in many situations. What better way is there to gain information about the enemy and the terrain than by frequent and aggressive patrolling?

Small patrols, whether on foot, motorized, or airlifted, could bring back ac-

curate descriptions of everything observed during daylight. There would be positive verification of a patrol leader's description of anything because it would be backed up by a picture. We've all heard the ancient Chinese scholar's estimate of the worth of a picture. The amount of pictorial information brought back would be limited only by the cameraman's initiative and the supply of film. On the reverse side of the photo could be noted such information as the time the picture was taken, location of the camera, and the azimuth on which it was sighted. Some of this information, in conjunction with the picture itself, could aid in checking map accuracy.

Photographs could show such items of military interest as stream crossings, bridges, roads, vegetation, enemy positions and troops, combat vehicles, and so on—all of immediate interest to the company commander. There would be no need for a skilled technician to interpret these photos since all of us are

accustomed to seeing pictures that have been taken at ground level. Also, our ground-level cameraman may be able to see more, for the enemy is sensitive to probing eyes in the sky.

This camera should be relatively inexpensive, compared to those used by combat photographers, information officers, and the like, and use only film that is readily available. Its most important feature would be the ability to develop its own exposed film in a matter of seconds. In the hands of the average front-line soldier this simple camera could provide all commanders with accurate, timely and understandable information. Let's help the infantryman do his job more efficiently. He's not through!

**Capt. Henry W. Rawlings**, Infantry, served in the Pacific as an enlisted Marine from 1942 to 1945. He was commissioned in the Army in 1950, and is now an ROTC instructor at Purdue University.

## WHERE ARE THE NCOs?

### CAPT. ALVAN C. HADLEY, JR.

The meager promotion authorizations in grades E-5 through E-7 indicate that enough noncommissioned officers must be on active duty somewhere within the Army. It is also apparent, from where I sit, that most first-three-graders are not on duty with line units but are at large military installations or on special assignments. E-7s are generally abundant within line units; the supply of E-6s varies (short in most units); but the number of E-5s is far below authorization. My association during the past year in various umpiring capacities with several dozen rifle companies—airborne, armored, re-

duced TOE, standard, and Pentomic—reveals that my own unit's situation is not exceptional: twenty-four AUS (two-year draftee) acting sergeants in PFC and E-4 grades who are filling E-5 and E-6 vacancies.

Army-wide assignment figures are not available to me, but it is not illogical to believe that most if not all combat units are short of E-5 and E-6 noncommissioned officers. I do not know whether the authorized number of first-three-graders is satisfactory, or whether homesteading assignments get more than their share, or if authorization is insufficient to handle both the sedentary-special and line requirements. On the surface, the situation in line

units looks like this to me:

The Army must be close to authorized noncommissioned strength by grade (or is holding back promotions in order to handle officer reversions). A considerable shortage of E-5 and E-6 exists in many line units. There is little chance of promoting the man currently doing the job—usually an AUS with less than two years of service. A drop in combat efficiency will occur in all line units that are short of key noncommissioned officers, in direct proportion to the number of departing AUS acting sergeants, every other year until new draftee packets are integrated and new AUS potential leaders are singled out and trained.



It might be well to add that the techniques inherent in the Pentomic structure are revolutionary in many respects and will require much study and practical application by officers and noncommissioned officers alike. I doubt if these new techniques can be mastered by noncommissioned officers with line MOS alone. The backbone of the U. S. Army must be where it is needed: in the line units.

Here are three possible solutions to the problem:

(1) Pare down some of the home-steaded empires and assign MOS-qualified noncommissioned officers to line units and keep them generally up to TOE strength.

(2) Raise the number of noncommissioned officers authorized (and revise promotion authority) to accommodate both the immobiles and the draftee acting sergeants doing first-three-grader work.

(3) Eliminate enough line units so that every noncommissioned officer can fill a TOE slot.

Option (3) is ridiculous; (2) is poor at best; (1) would be unpopular with the various headquarters as well as with many noncommissioned officers concerned.

Millions of words in PIO handouts concerning career attractiveness and advancement are a poor substitute for the pay differential of the AUS E-3 or

E-4 who has been successfully filling an E-5 or E-6 vacancy during the best part of his two-year tour. Likewise, it is difficult to watch today's uncomplaining line noncommissioned officer carry more than his share of the load. The situation needs correction. Either fill noncommissioned vacancies in combat units with soldiers who hold the rating, the MOS, and receive the pay, or promote those who are doing the jobs.

**Capt. Alvan C. Hadley, Jr.**, Infantry (USMA 1946), was with the 187th Airborne RCT in Korea. He now commands a company in the 2d Battle Group, 8th Infantry.

## KEEP 'EM ON OUR SIDE

**LT. J. MICHAEL McCLOSKEY**

**L**ET'S face it. Today the Army competes directly with the other services for public approval of its programs; and, therefore, for its appropriations. What legitimate means are available to the Army to favorably impress the public with its case? What can we do to influence policies through influencing our people?

Basically, the Army's case rests on the facts that it has an important mission, unique to it, and that it can perform this mission effectively and efficiently. We must convince the public by demonstrating the Army's importance, effectiveness, and efficiency.

We can go about this in a number of ways. We can undertake forceful public relations programs. We can send general officers to speak at local businessmen's luncheons; or join community fund-raising drives; or sponsor radio and television programs. These approaches may do some good, but they have their limitations. Speeches to local clubs may leave an impression favorable to the Army, but as often as not they succeed only in conveying the impression that General Ducrot is a genial fellow but a poor speaker. Supporting fund-raising drives may convince the townspeople that the Army has a heart of gold, but it does little to impress them with the Army's value in the national defense. By sponsoring radio and TV programs the Army may entertain the public, but people will probably pay about as much attention to its message as they do to a commercial.

We might attempt to influence the public by encouraging our Reserve, National Guard and retired officers and men to enter the political arena to battle for the Army's cause, but that is apt to raise doubt about the Army's understanding of its Constitutional role. We might have general officers engage in open interservice squabbles and argue with Administration policies in the press, but this is likely to be the most disastrous of all. Rather than being impressed, the public would no doubt feel that the Army does not know its place. Since discipline is the mortar which holds the military together, by disputing the policies prescribed for it the Army would be showing how little it understands the discipline by which it professes to live. We are not likely to impress the public by showing that we cannot take orders.

**I** think the most effective way to convince the public of the Army's value is not by sending emissaries into the national political arena but rather by sending them back into the life of the nation's countless communities. Each year thousands of young officers and enlisted men enter and leave the Army. Will those who leave go as friends or as enemies? Will they speak well of the Army, or will they denigrate it at every turn? If they speak well, the Army wins millions of friends it needs if it is to stay strong to defend the nation. If these men can tell of waste, stupidity, and inefficiency, then we lose the support of millions.

To win the support of the officers

and men it returns to civilian life the Army need not coddle them. In fact, it must not. But what it must do is demonstrate to them that the Army is competent. It must show them that the Army is effective, efficient, rational, and fair. For any human institution, this is admittedly not a simple task; but, difficult though it may be, it is also the surest way to insure the Army's future and the nation's safety. If discharged soldiers go home convinced that the Army is competent and necessary, popular support will be forthcoming, for the public bases its opinions of the Army largely on what its returning sons and daughters tell it. However, if the home folk hear of costly weapons that do not work, of men who are pushed far too hard and of others who work hardly at all, of arbitrary orders, of formalities that no longer make sense, then the Army will find its support dwindling and its strength declining.

When the Army spends considerable sums on mechanized vehicles that are deadlined most of the time, the word will be carried home. The taxpayer will also hear of expensive mechanisms that are so complicated they are rarely used. When the public learns of countless forms being used where a few would suffice, of needlessly complex procedures being followed in mechanical conformance with regulations, of anachronistic traditions, of uninformed directives which betray ignorance of conditions in the units affected, then it is likely to become less than enthusiastic in its support.

It is within the power of all of us



to do something to help convince those passing through the Army that it is worthy of their support when they revert to civilian life. Those of us in lower echelons may not be able to rethink whole programs or to effect major changes, but we can think our own local planning through more carefully and do much to remove the petty irrationalities that so annoy their victims. The greater part of the unpleasant associations made with the Army are not products of major policy decisions, but simply the results of thoughtlessness or lack of consideration. The greater part of the burden, therefore, in the effort to win friends for the Army devolves upon officers who command small units. They can contribute most significantly to this effort if only they take care to exercise more judgment in construing their missions, increased foresight in planning them, and greater consideration for their men in accomplishing them.

Higher commanders carry a heavy burden too. More than ever before, traditional weapons, methods, and as-

sumptions must be subjected to searching reexamination. It does the Army little credit if it permits most of the men in a unit to realize that though their performance of their outfit's mission is beyond reproach, the mission itself is obsolete. Today, most of whatever waste that exists is to be found not in the supply rooms of small units but rather in large plans poorly conceived, in high-level policies not properly implemented.

Plato's *Republic* posed the crux of the problem very well. In referring to the military, the guardians of his state, Plato said they must be at one time as fierce as watchdogs toward the enemy and as gentle as sheepdogs toward their fellow citizens. The problem lay in how to train the military to have these two diverse natures. Today that problem translates into the question of how to maintain an army which is both effective and efficient in dealing with an enemy and, at the same time, is rational, humane, and fair in dealing with its own people, who are citizens drawn from the nation at large.

The problem can be solved through diligence, imagination, and critical thought: Our fate as a nation demands that it be solved. Our security demands an army competent to carry out its mission; the public conscience, additionally, demands an army reasonable in its relationship with the citizens serving with it. The key to building public support for the Army lies in the solution to this problem. The rapid passage of countless officers and men through our ranks under the new Reserve Forces Act offers an unparalleled opportunity to pick the key that will lead to the support the Army so much needs. It's up to you and me, who are in a position to do so, to seize the opportunity.

**Lieutenant J. Michael McCloskey**, Artillery, earned an A.B. in American Government at Harvard. He was commissioned from the ROTC and graduated from the OBC at Fort Sill in 1957, and is currently Assistant S3 and Fire Direction Officer of the 597th Armored FA Battalion.

## TAKE THE YAK-YAK OUT OF REPORTING

### LT. COL. JOSEPH R. MEACHAM

Having recently accompanied a division commander through a series of command inspections, I am once again unimpressed by our reporting ritual. The well-turned-out but garrulous reporter is all too frequently left standing on his manicured stoop at a rigid salute, eyes straight ahead, loudly reciting his rehearsed report, long after the inspector and entire entourage have passed: "Sir, Sergeant First Class Aloysius S. McGillicuddy reports Barracks Number One, Second Platoon, Headquarters Battery, First Battalion, Umpteenth Artillery, ready for inspection, sir!"

Then, despite the fact that division commander, battery commander, battalion commander, ADC, divarty commander, and IG with assistants, in that order, have already filed past him, the sergeant remembers the last part of his spiel and respectfully commands, "Follow me, sir!" From his polished but lonely vantage point the sergeant suddenly realizes that his last statement sounds ludicrous (even to him), for the inspection of the first floor, including latrine, is already under way. The battery commander frantically waves

his arms to indicate that if the sergeant hurries, he can "cut 'em off at the pass" and lead the team upstairs.

Let's analyze the sergeant's report. The first word is, of course, essential, as are the next three. A soldier's first name and middle initial, highly important on records, serve no purpose in an oral report. The next word also is superfluous. It isn't necessary to tell the inspector you're reporting. The very acts of standing at attention, saluting, and stating your rank and name tell him that. From that word on to the drawn-out end, the drivel approaches utter absurdity in direct ratio to the number of words used.

It adds nothing to tell the inspector that this is Barracks No. 1 or the 2d Platoon. If he sees fit to commend or gig, whoever is taking notes can easily make identifications. When the reporter gets down to where he says the barracks is ready for inspection, I can only say that it had better be ready because, as the children's game says, "Ready or not, here I come!" Then "sir" again, usually included only because it has been so long since he started that by now the reporter has forgotten whether he commenced with a "sir" or not. So he tacks it on, just to be sure.

The last little phrase, or what we might call the postscript, "Follow me, sir!" is unnecessary and, unless said in the right tone, might even offend. The inspector habitually and traditionally follows the person whose installation is being inspected. Regardless of his rank, he'll never feel insulted if the reporter will step smartly into the lead, provided he adjusts his pace to that of the inspector or doesn't try to lead him past a locked door or some other suspicious point.

How did we acquire this bad habit? FM 21-13 is at least partly to blame. In my opinion, the two examples under "Reporting to an Officer" contain too many words: "Sir, Private Jones reports to Captain Smith." The first three are essential, but are the last four? By his very presence the soldier is reporting, and Captain Smith certainly knows his own name. The next example is the old standby: "Sir, Private Jones has the first sergeant's permission to speak to the company commander." Again, everything after the third word is ridiculous. Private Jones jolly well had better have permission, or else avoid his first sergeant for a couple of weeks. All the blame shouldn't be put on this FM or upon

any other publication. I'm sure that for the most part our reporting ritual, like Topsy, "just grewed."

I think all reports can be limited to three or four or five words. The first should be the constant "sir" as should be the final, the reporter's last name. The variables in between are for the full statement of rank: "Sir, Private Jones" or "Sir, Sergeant First Class Smith" — short, smart, and military. You can report without having to come up for air.

There's no rule or regulation which says the whole story must be told during the report. Questions and answers can find out anything desired. If Private Jones gets into the company commander's office with a harebrained request, it won't hurt the boss a bit to ask, "Did you get the first sergeant's permission to see me about this?"

Let's cut out the yak-yak, save our breath, and get to the business at hand. How about unit commanders trying it? If you agree my way is bet-

ter, write it into company, battery or battalion SOP, and then have all hands conform until it becomes second nature. I'll bet you'll never have a VIP complain about your reports being too short. I tried it in my battalion, and it works.

**Li. Col. Joseph R. Meacham**, Artillery, Assistant Executive Officer, 2d Armored Division Artillery, commanded the 94th AAA Battalion (2d Armored Division) in Germany.

### COLONEL LEE C. MILLER

According to a recent survey the majority of workers in industry rate recognition of accomplishments by superiors first, as a motive for sticking to their jobs. This is not surprising, for it is only human to want a pat on the back and to be told you are doing a good job. If that is true in industry, it must also be true in the Army. Why don't we capitalize on this and improve peacetime morale by adopting a more liberal policy of awarding decorations?

The Army does recognize achievement through letters of commendation and of appreciation, certificates of achievement, and efficiency reports. Unfortunately, it seems that in peacetime we rarely award decorations for outstanding service. We overlook the psychological effect of visible evidence of service which won the acclaim not only of an immediate superior but also of the Department as a whole.

Letters of commendation and of appreciation and certificates of achievement are commonly used to reward deserving people. But who wears a letter on his lapel? Moreover, these written acknowledgments are meant primarily to reward a feat worthy of recognition but not earning a decoration. Let's use them exclusively for that.

Efficiency reports, no matter how complimentary, are not designed to reward outstanding service. They only measure a person's efficiency and compare it with that of his peers. Moreover, efficiency reports are not public recognition because they are held in confidence and accessible only to a few authorized persons. For some officers their cumulative effect becomes apparent only after many years of outstanding service marked by superior reports, when they become general of-

ficers. Not all outstanding officers become generals, and there is a definite relationship in many cases between stars and a particularly favorable set of circumstances in one's career—like being on the right job under the right chief at the right time. Despite these obvious inequities, some people contend that superior efficiency reports and ultimate promotion to general officer rank are reward enough for outstanding service. Besides failing to recognize the psychological effect of rewarding today's deed today, these people ignore Army policy and regulations which authorize suitable decorations for meritorious service in appropriate cases. It's time we used the efficiency report and the decoration for outstanding service for the purpose for which each was created.

Something is basically wrong with a system that recognizes the need in wartime for a comprehensive set of awards scaled to the degree of meritorious deed and which almost totally disregards that need in peacetime. The deed is the deciding factor, not the international political situation.

Besides making no distinction between various degrees of achievement, our peacetime system does not provide for a Cold War situation. Under certain conditions, high-ranking officers (almost invariably generals) are awarded the Distinguished Service Medal (DSM). Only the Legion of Merit and Commendation Ribbon (CR) with Medal Pendant appear to be within the reach of other officers and enlisted men. Moreover, our system admits only a top (DSM) and a bottom (CR). Surely we could just as well award the Bronze Star Medal (for merit) in peacetime.

There are many types of service which, by their nature, closely resem-

ble those for which various decorations were awarded during World War II. Seventh Army stands ready to repel aggression. In Korea, other units assist in maintaining an uneasy truce. Scattered over the world are MAAGs and missions that help build the military forces of host countries so that they may unite their strength against the common enemy. Within CONUS the Army Strategic Reserve maintains itself ready for rapid deployment overseas in an emergency. Outstanding instructors at service schools contribute greatly to the knowledge and combat effectiveness of the Army as their predecessors did during World War II. The maneuver director and his staff and key umpires in a successful large-scale exercise that tests new weapons and doctrine all merit suitable awards for contributing to the Army's preparedness.

The conditions I have mentioned do not represent those which existed during the easy peace between the two world wars, but our system of rewarding outstanding service appears to be geared to that period. It must be changed to meet existing conditions. Fortunately, the solution lies entirely within the Army's control.

I do not propose an indiscriminate distribution of decorations, for such an action would only cheapen them. On the contrary, decorations for meritorious service should be made on an objective, discriminating basis so as to properly recognize achievement in relation to the importance of the job and to preserve the value of each decoration.

**Colonel Lee C. Miller**, Infantry, who served with Fifth Army and 15th Army Group in Italy, is Deputy Chief, MAAG, Cambodia.

# NEW DEAL FOR RESERVE SCIENTISTS

*USAR Research and Development Training units are revitalized by a new program that emphasizes military research and development viewpoints*

## PEREGRINE WHITE

**A** NEW program is under way for the Army scientific reserve units. Its genesis antedates Sputnik, but by a few months only. Now, as our need to exploit our scientific resources to the fullest possible extent becomes the talk of the town, the success with which the Army scientific reservists are kept together and utilized becomes a matter of obvious importance. It was always important, of course. It is our realization that has been sharpened.

Possibly you have never heard of the Army scientific reserve units. They came into being right after the war, in 1948-49. The idea was to maintain ties with the many highly-trained scientific people who had been on active duty during World War II. The purpose was a good one. This is apparent if you take a look at the membership of the fifty-two research and development reserve units that are now in existence. At the outset they ranged in size from fifty members up to approximately 375 for cities like Washington, D. C. or 500 for New York City.

For the most part the members are individuals who were field rank officers during World War II. Many of them served on the staffs of generals as scientific consultants. A typical scientific reserve unit roster today will include people such as these: the vice-president

of a great state university in the Far West, a troubleshooter for a large electronics firm, the senior chemist of a big pharmaceutical house, the senior scientist of a meat-packing firm, a vice-president of a California aircraft firm engaged in producing guided missiles. As this list indicates, these "average" members of the Army's scientific reserves hold key positions in civilian life—positions with salary tags ranging from \$15,000 to \$30,000 per year.

### Bird-in-the-hand idea

Small wonder, then, that the idea of scientific reserve units occurred to someone or other after World War II, as a means of keeping this kind of able scientific talent in contact with the Army during peacetime. The contact would afford the Army big dividends in time of emergency, when it would certainly need a large group of high-caliber individuals to call upon to handle some of the colossal problems of actual warfare. Pending such an emergency situation, the Army would have a reservist group that would be a good source of basic policy advice to the Army with respect to its research planning. The reserve units were also in a position actually to originate projects of research to be carried out by them.

There was an obvious "bird-in-the-hand" aspect about these scientific reservists. We hear a good deal these days about the very perplexing problem of education that confronts this country, both general and scientific

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Peregrine White is the Science Information Officer of the Army's Office of Ordnance Research at Duke University.

education. We have worries about the supply of scientists in the future. These worries prompt the immediate question: Are we making best use of the scientists of today? This is a big question. Intelligent direction of the Army scientific reserves is one facet of this question. A bird in the hand is still worth two in the bush.

We realize this keenly today. But our concern was not particularly vivid during the first few years of the post-war era. In fact, after an auspicious beginning, with the scientific reserve units reporting directly to the Assistant Chief of Staff, Research and Development, for technical guidance, and to local Army commands for housekeeping, the units encountered a period of lean years. This was unfortunate, in view of the initial steam behind the new units. The ex-soldier scientists were as anxious to keep up with the Army as the Army was to keep up with them. Scientific reserve unit meetings provided a get-together for high-caliber scientists of various disciplines. They enjoyed the opportunity for across the board discussion of scientific matters and of the Army's policies and planning for research. As a by-product, the meetings afforded a place for communication among scientists of different fields, a type of inter-field communication that has been frequently cited as a fruitful exercise in itself, in an era of scientific specialization.

#### **Faults in the program**

What happened to tarnish the auspicious beginning of these scientific units? A member of a unit in North Carolina commented on the following elements of attrition that reduced his unit from an initial membership of approximately seventy men down to a thin roster of ten: (1) A number of people lost interest due to the lack of specific direction and program; (2) As they dropped out, it was very difficult to recruit new members to replace them. It took about six months to get the papers up for approval, and about an equal amount of waiting time for final action; (3) Where a transfer was involved, the Technical Services, anxious to retain men in mobilization slots, were reluctant to provide the necessary consent; (4) The scientific reservists also discovered that they had little or no possibility of being increased in rank; and (5) They received no active duty pay for attendance at drills and evening discussions or lectures on military scientific problems at a time when other reservists did receive pay. The lack of a distinct program was the most important cause of trouble, in his opinion.

For all these reasons combined rosters of the scientific units dwindled. Many of the members transferred into the traditional reservist units, into mobilization slots, where a definite program, possibility of promotion, and compensation (for a time at least) were all available. This in many instances represented a waste of manpower, since the mobilization slots frequently would never exploit the full capabilities of the individual. For example, a lawyer capable of outstanding contributions

on the staff of a general might, in a mobilization designation, be billeted as the legal officer of an obscure procurement office, checking contract provisions; useful and necessary, certainly, but not a wise use of his exceptional talents.

The system of programming speakers three months in advance, with an additional two months lead time to secure necessary concurrences, proved a further headache. It meant that a speaker had to be pinned down to a definite date months in advance. This mechanical feature, plus the dwindling meeting attendance, made it increasingly difficult to secure outstanding speakers. In sum, the scientific reservists came to regard themselves as the orphan children of the Army reserve system. At least such is the perspective of one man who is still carrying the torch for the concept.

To some extent, he acknowledged, the scientific reservists invited a jaundiced eye, particularly at the local command level. For one thing, they resisted "militarization" of their meetings. Required lectures on such things as the courtesies of the service, regulations on saluting, lectures on preparation of morning reports, and the like, were on occasion given a polite egg-head brush-off. Possibly the system was somewhat at fault here. Maybe the scientific reserve units were "problems" in the sense that the gifted child is a problem to our school systems.

#### **Stimulus of a new program**

So much for the somewhat leaden past history of the scientific reserve units. It is recounted here only for the proverbial reason that he who ignores history may find himself doomed to relive it.

The auspicious new look for scientific reserve units stems from the issuance, earlier this year, of a yellow-backed pamphlet setting forth a "General Staff Management Training Program for United States Army Reserve Research and Development Training Units."

Closely following the issuance of the new program guidance pamphlet, the Washington, D. C., USAR R&D unit spearheaded a two-week seminar that was held last August in Washington, with about a hundred members of scientific reserve units from all parts of the country in attendance. They were briefed on the newly issued program guidance pamphlet, and had a chance to hash over the entire scientific reserve problem.

Out of this seminar came a revived general concept of what the scientific reservist can do for the Army and for national defense. It was recognized that research and development problems arise in the military in many ways and in many places. It is desirable and indeed imperative that the research and development officer, in any branch of the armed forces, have a general knowledge of over-all military operations, plus an understanding of how his branch and his responsibilities fit into and affect these operations. It is also desirable that he be qualified to recognize and appreciate the relationship of his branch to other branches, and the effect his branch has upon other branches of the service, as



well as upon the over-all research and development mission.

The new training program is designed to achieve these ends. Its subject matter is directly concerned with the military viewpoint of research and development, which is not precisely the viewpoint one would encounter outside the military. Much of the success of the R&D officer is dependent upon his individual understanding and appreciation of this military viewpoint.

For example, military equipment emphasizes combat efficiency. This is at one and the same time a very clear and an illusive frame of reference to specify quantitatively, except by those who have good judgment and understanding. To cite an example falling in the field of operations research, the problem of increasing the firepower of a weapons system may entail the improvement of the communications system for intelligence personnel supplying information to the weapons system. Problems requiring such analysis are exactly the type of questions the scientific reservist is good at.

The capabilities of individuals who form the membership of the scientific reserve units were described by a Regular Army officer who participated in discussions at the August seminar in these words:

"The scientific officer knows he is more valuable to the service if he does what the others cannot do but experience has shown that he gets penalized in promotions and advancement when he does so. Consequently many scientific officers avoid specialist assignments and are consequently not used efficiently. We must define what part of this unique capability is critically needed by the Army, we must determine how it should best be used; and then we should try to establish an equitable situation to entice the competent individuals to choose rather than shun such assignments."

#### Scientists of general staff caliber

The new program is already coming into existence. It recognizes that officers in the research and development units are of such caliber that their training should be of general-staff nature. The program should do for the scientific officers what command-and-staff school does for combat officers.

The suggested case materials already issued to all scientific reserve units will certainly prove stimulating to many. Others will draw up their own case studies. To quote a few titles from the suggested program, we note these: "Role of research and development tests in establishing reliability," "Testing research and development equipment in combat zone," "Comparison of systems concept and technique concept," "Logistical considerations based on land and amphibious operations."

Given competent and clear guidance, the scientific reserve units should regain their earlier position of strength and enthusiasm. Their consideration of vital and complex problems of military significance may well yield benefits to Army leaders actually faced with these problems as their day-to-day concern. The reserve units will, in effect, constitute what have been described as "critiquing cells" examining Army policy and perspective. Many of the scientific reservists have little likelihood of ever going on active duty in a future emergency. Their value is not keyed to that aspect. Their value is that of a group of experienced not-too-elder statesmen who have served importantly in wartime and who have the mental caliber to shed light on many perennial Army problems. They will also be of tremendous value in indoctrinating younger men as to the interrelation of scientific approaches and military planning.

The relationship between the Active Army and these reservists is a two-way street. It involves guidance of the scientific units from topside, via challenging projects for discussion by them. It involves awareness topside of what scientific reservists can contribute to the Army. It involves a critical receptiveness at Pentagon level to recommendations and proposals submitted from the reserve units to the top, in order to separate chaff from wheat, and thus encourage submission of solid ideas by the reserve unit membership.

The scientific reserve units evidence a continuing eagerness to serve the best interests of the Army. The new program makes it appear certain that their abilities will be guided and stimulated and drawn upon to this end. In every sense of the word, the new look of the Army scientific reserves is an auspicious one.



Many Army reserve scientists are deep in such military R&D work as these ABMA technicians who are assembling the Jupiter C satellite

A pretty Wac selects a film from the current catalog. She can have the film projected on the viewing screen at her right

After selecting the films she wants by catalog numbers she collects them on a "push-cart" which she wheels through the film stacks



## Film Service Supermarket

Fort Bragg's Film Exchange took a tip from a Quartermaster Corps film it had in its files

"Supermarket" style self-service is proving its ease and efficiency at the Post Film and Equipment Exchange at Fort Bragg, N. C. The Exchange's change to self-service has provided better service for "customers," increased the use of the exchange, and lessened the work of those who operate it.

The customer selects his films from the film catalog, notes the index numbers, goes to the film racks, where some 1,700 training films are arranged by number in a system similar to that used in libraries, picks up the films he requires, and finally files out through the check-out counter where a clerk double-checks all films against the request and the customer signs the request. Projection equipment is issued in the same way.

This application of the supermarket system came about through a chance viewing by myself and the civilian director of the exchange of a Quartermaster Corps training film on self-service supply.

"If it works for them, why not for us?" we wondered. I hope it works as well for them as it does for us.

LT. E. R. ALLEN

Check-out counter of the self-service film exchange is the all-important control center of the setup





## LATITUDE 58 — ALTITUDE 200

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## 11 MEN—1 MIND

(Continued from page 24)

commanders and so another echelon has been added to regularize and simplify the working of the rifle squad. If the team is to be treated as an independent command and sent out to perform separate functions, then the new organization would serve only to push the basic problem one more notch down the stick but would do nothing toward solving it. As seems more likely, however, the squad itself will be the smallest unit expected to perform an independent mission, and the teams will always be in close functional relationship with each other. This is good, and if fully understood and properly used, should increase the effectiveness of the U. S. infantry by a factor of several hundred per cent.

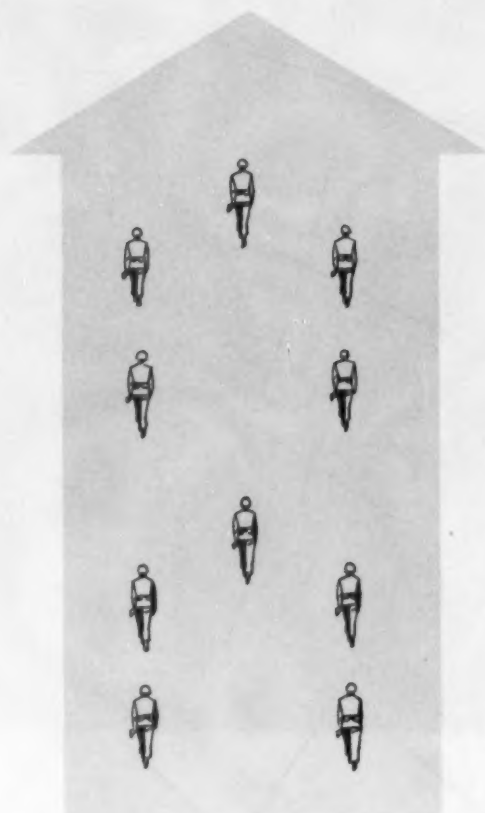
The new squad organization only makes sense in relation to the battle drill which it makes possible. It is well to reflect for a moment upon the fundamental virtues of this battle drill. It is not because the battle drill as such is necessarily the best way to fight in any one situation but rather because a battle drill based on a squad organized into two mutually supporting teams serves to articulate organizationally the basic mental framework with which the squad leader must work. It automatically provides the fundamentals of the squad's organization for any particular task. *Battle drill reduces by a large factor the necessity for battle-field explanation.*

### Mechanical function that takes much heart

It is no longer necessary for the squad leader to organize his squad into functional elements (fire-manuever) each time he issues an order. The battle drill is an operational SOP. Like any SOP it takes the place of certain orders which otherwise must be issued again and again. In the case of a squad it constitutes an "understanding" which tends to congeal the squad into an organization. It does not tell the squad leader how to fight but it gives him the basic organization with which to fight. Considering the difficulties under which he must operate we must instinctively favor any device which will cut down his task to manageable proportions.

By rehearsals and drills the soldier comes to know and expect that his team fires when the other team moves, and vice versa. However, he must be told *where* to move and *when* to fire, for battle drill cannot do this.

Let us go deeply into the application of the battle drill to the squad leader's actual problems of command. Infantry fighting is a mechanical function even though much heart is involved. It has two chief requirements—to kill and to advance. A technique or a maneuver which does not contribute to one or the other of those functions is superfluous. A squad spends more than ninety per cent of its time moving and less than ten per cent fighting. On this basis alone it is important to develop the best techniques for moving.



## TRAVELING FORMATION

**Team BRAVO follows Team ALFA without interval. There are ten yards between men.**

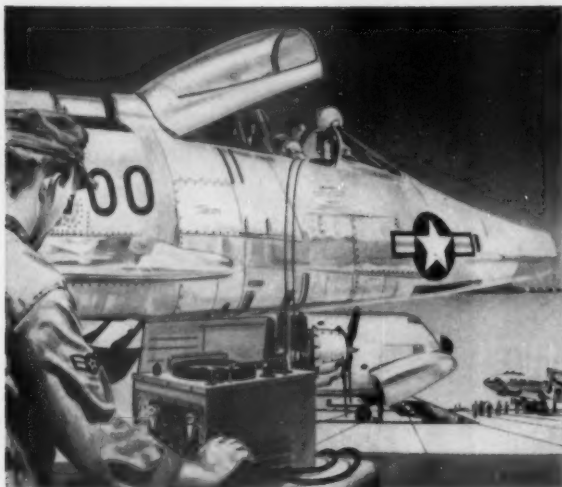
The squad moves under three general situations:

- It simply travels from point A to B *without concern* for the enemy (as part of a larger unit, etc.).
- It travels toward the enemy with the *chances of contact remote* but barely possible (some precautionary measures are justified but speed is desirable).
- It travels toward contact, *expecting to encounter enemy resistance at any moment.*

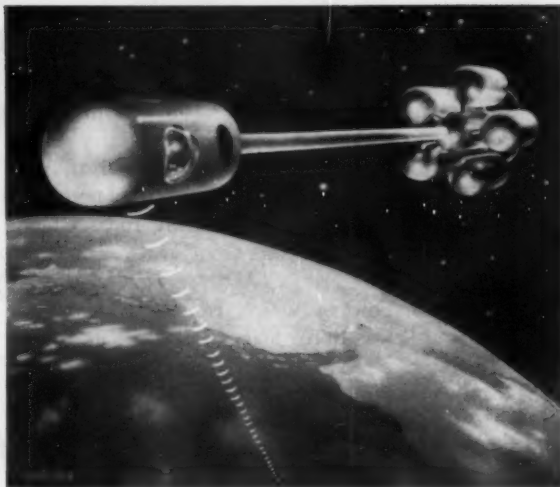
If a rifle squad can do these three things well it can do the vast majority of its offensive chores well. In case the function to be performed is to move, the simplest way to move is to have team Bravo follow team Alfa without interval. This could be called the **TRAVELING FORMATION** and—all other things being equal and in the absence of instructions to the contrary—this should be the normal formation for the squad.

If the squad has been sent on flanking duty or on patrol to investigate a farm, a village, a copse of trees, or a ridge line, and if contact does not seem imminent but possible, then the function to be performed is to





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move in a formation which will not decrease speed but which will provide an opportunity to react and give the squad some protection if it unexpectedly runs into enemy fire. The easiest standard solution to this problem is to drop Bravo team back fifty yards (just outside the beaten zone of fire directed at Alfa team) with a mission of following Alfa prepared to deliver retaliatory fire at any enemy force which engages Alfa. Stealing a word from armor, this role could be best described as a **TRAVELING OVERWATCH**.

The last situation in which contact is expected momentarily calls for Bravo team to conduct its "overwatch" from successive, carefully selected positions with team members prone in firing position from which they could engage the most likely enemy positions. This technique would logically be termed a **BOUNDING OVERWATCH**.

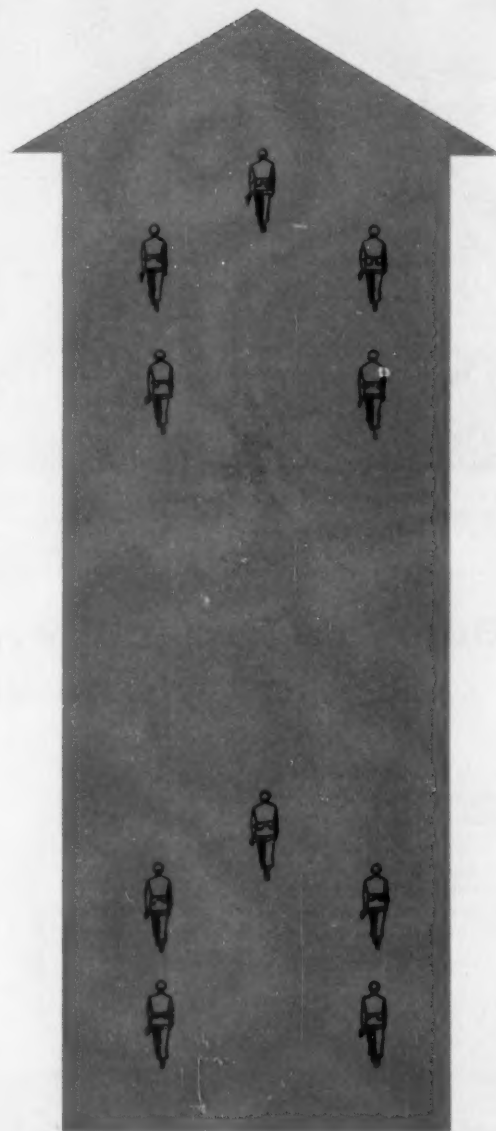
The squad must also be prepared to fire and move in the attack. This function may be performed by the alternative **FORWARD MOVEMENT** and delivery of **OVERWATCH FIRE** by the two teams in a consecutive fashion. This may sound like an oversimplification of the attack but without bringing in the enemy and the terrain it covers all the relevant principles both organizational and operational. Everything else the squad does is less complicated and need not be discussed.

These techniques are functional. Any technique which further complicates the performance of these functions is unnecessary and of doubtful merit. For example, there is no apparent functional purpose of any real moment for the diamond formation or the squad wedge.

The introduction of the two teams in a squad passes some of the harder problems on down to the team leader. However, his task is greatly simplified by the fact that the main decisions are made for him and the function of his team is usually clear and unambiguous. He either fires or he moves or he is preparing to fire. In a sense he inherits the command problem in miniature because now he is the only man in the whole chain of command who in the strictest sense commands men instead of units.

The quality of leadership at this level may be expected to be of such a nature that physical demonstration must inevitably be a main technique. "Follow me and do as I do" may often be the extent of instructions offered. This is not ideal but it is a comprehensive and durable instruction. The most effective team leaders will do more and John Doe will be told where to move and where to fire. Under heavy fire when reluctance to follow general instructions will increase, the team leaders must be specific or their teams will fail to function.

It is extremely doubtful that very many American soldiers have ever given their lives for their country in response to hand or arm signals. The use of such signals should be reexamined. The distant wave of the hand is too cryptic, too vague, too impersonal, and probably too passive to produce a movement forward.



## TRAVELING OVERWATCH

Team BRAVO follows Team ALFA at an interval of fifty to seventy-five yards in open terrain and twenty-five to thirty yards in woods or bush.

Notwithstanding some American mythology to the contrary, there is very little initiative demonstrated on a battlefield. When the bullets start to fly the average man lies low. He stays that way until he is ordered to do otherwise. For example, the main difference between green and veteran units is that in green units it is customary for everyone to lie low waiting for the others to get up and do spontaneously what they have been trained to do for so long, and what our folklore tells us they will surely do—and this is

# **T-37**

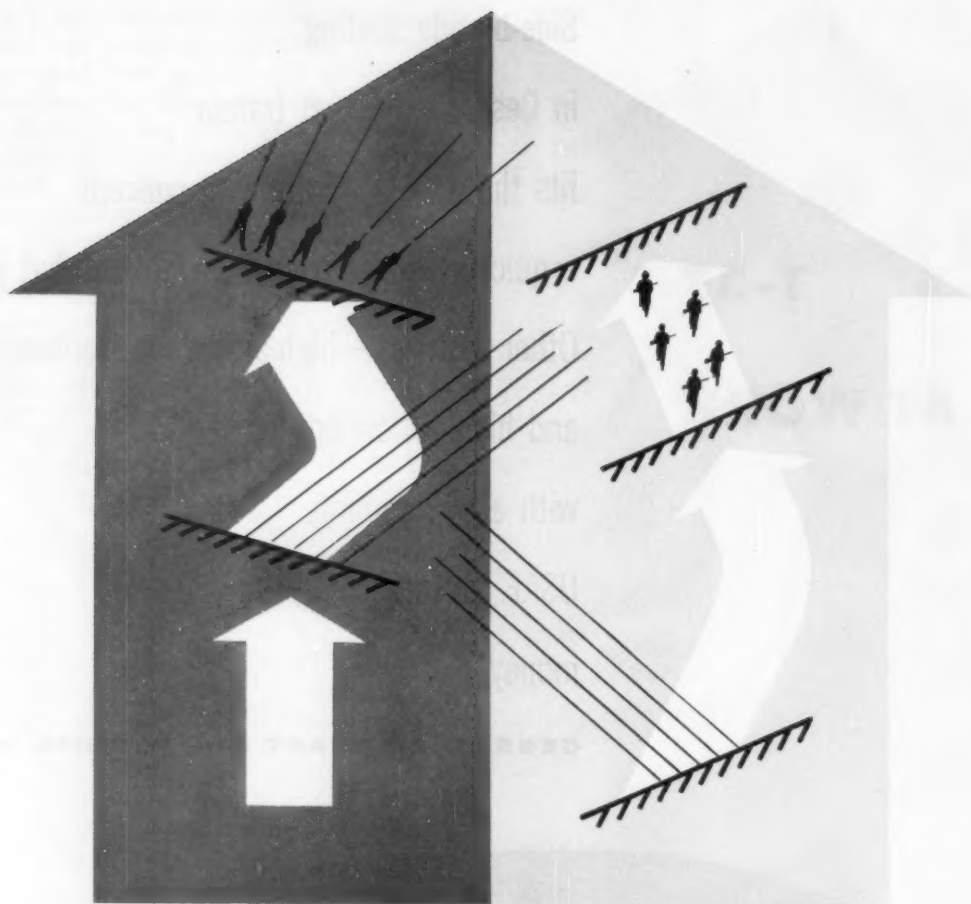
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## BOUNDING OVERWATCH

When contact with the enemy is expected the squad's teams make alternate movements. Team ALFA moves forward under cover of the fire of Team BRAVO which is in an overwatching position. At the end of its advance, Team ALFA takes an overwatching position and covers the forward movement of Team BRAVO to its next overwatching position. Thus the squad moves forward in short, protected rushes.

often a long wait. In the veteran unit some man, who has learned the hard way that nothing happens unless someone takes measures of some sort, looks a few soldiers straight in the eye and orders them personally and individually to do some very specific task like "Move up to that hedgerow"—"Throw a grenade in that window"—"Cross that field"—"Fire at that house." Lacking such orders the soldier does what comes naturally—nothing.

There is an interesting thought buried in this subject. This waiting for the soldier's initiative to display itself on the battlefield is consistent with the legends of Lexington and Concord but not with the basic premise on which the system of military discipline is founded. The system of Army discipline is presum-

ably built upon the rationale that instinctive automatic obedience is required on the field of battle. This principle should be applied right down to the last man. But the concomitant requirement is that the superior of this last man must issue the orders which the last man is expected to obey instinctively. Here is the traditional weakness. Of course the system is justified and essential in spite of this tendency to discard it at the cutting edge. A process of natural selection partially offsets this tendency in combat.

It is a source of amazement to some training specialists that veteran divisions can fight so well with little or no formal training in infantry combat. The single characteristic which differentiates veteran infantry units from green ones is the predominance throughout the



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ranks of *dominant* leaders. These men are not always polite—they are usually impatient and always self-assured. They are seldom impressed with the amount of initiative they find lying around loose. They know what they want—they issue orders to that effect and see that they are carried out. Whereas most men will not accept risks voluntarily, very few men have the courage to refuse to obey a commander who looks them in the eye and says "Take Smith and Jones and go in that house and clean it out," or "Peterson, fire a clip at the corner of those woods."

In good and battle-tested units, just as in good baseball teams, there is always a lot of chatter. This chatter is the process of continually revising, adding to and strengthening the mental picture of the developing operations. The Germans, who are competent infantrymen, to say the least, are noisy fighters. Hans and Fritz get lots of instruction from Wolfgang the Feldwebel during the attack—where to move or where to shoot.

The bulk of the fighting is always done by a handful of men who view fighting as a practical matter. They use no signals or magic words. They talk it over—decide who will do what and get on with it.

#### Finding the leaders

In these days of perpetual readiness we are faced with the problem of training leaders who are ready to go now. We do not have the natural selection of combat at our disposal. We must look for dominant personalities and put them in command. We must tell our squad and team leaders that they must become articulate—build word pictures—issue specific unmistakable instructions. Nothing is to be left to chance or doubt.

Few squad leaders are Doctors of Philosophy—some are more articulate than others, but prudence suggests that we simplify their tasks as much as possible and this is where the battle drill and the team system relieve the squad leader of at least half of his requirement for battlefield explanation. Those who claim that this deprives him of his prerogatives underestimate the size of the problem which remains to confront him. To decide—under fire—where the enemy is—how to approach him—how to use the terrain—how to control his teams—inspire his men—and how to keep the squad's mental picture alive is challenge enough for any man.

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### Sea Transport in an Age of Atomic War

(Continued from page 26) nuclear weapons with megaton yields and the means of delivering such weapons from submarines, we must avoid concentrations of shipping on the high seas as well as in port. Our experience in World War II showed that our losses to submarines diminished rapidly as the speed of vessels increased. The vast majority of our losses consisted of ships with speeds of 10 knots or less. There were practically no losses of ships moving at speeds above 20 knots. The most dramatic examples of the protection afforded by speed alone were the *Queen Mary* and the *Queen Elizabeth* which made repeated crossings of the Atlantic unescorted during the height of the German submarine threat. Their speed of thirty knots carried them safely past the wolf packs time after time. While there has been a progressive improvement in the underwater speed of submarines since 1945, and improvements in the tracking mechanisms of torpedoes, speed is still probably the greatest protection to merchant shipping.

The second characteristic desired in our ideal merchant ship is long legs (long cruising radius). It should be capable of making the voyage from a United States port to an overseas theater and return without refueling. This characteristic is of course incompatible with speed as fuel consumption rises rapidly as speeds increase. The answer to desired speed and long cruising

radius may be found in nuclear power; however, for the time being we will probably have to settle for speeds around twenty knots with conventional propulsion systems.

Our third characteristic, and perhaps the most important of all, is the capability for rapid discharge of cargo. The ideal merchant ship should be able to arrive at its discharge point under cover of darkness, unload its entire cargo, and be well out to sea before dawn. All items required to discharge its cargo should be part of the ship's equipment so that it is not dependent on shore facilities which might be destroyed prior to its arrival.

Our fourth consideration is the suitability of this vessel to commercial use. It is possible to design and build vessels which are very suitable to military use, but we cannot afford to maintain a fleet of merchant vessels which are usable only in wartime and another fleet for use in peace. They must be interchangeable.

#### Rapid discharge of cargo necessary

In line with the requirement for rapid discharge on the far shore, the Army in the past has given strong support to the construction of roll-on-roll-off ships. These ships are specially designed so that tanks and other vehicles can move on their own tracks or wheels from the dock to the ship or vice versa. These ships are in effect large ferries with multiple decks for carrying vehicles. The need for such ships can be appreciated



## U. S. ARMY ORDERS NEW HUGHES MODEL 269A HELICOPTER

Just ordered for evaluation by the U.S. Army, the Hughes Model 269A Helicopter represents a new era in light helicopter development. The 269A weighs in at 890 lbs. empty, has a useful load of 660 lbs. Created to add new mobility to Army observation, liaison and training activities, the 269A has a top speed of 90 miles an hour, a cruising range of 150 miles. Model 269A is powered by a 180 h.p. Lycoming engine. The rotor is composed of three fully-articulated blades of unusually simple all-metal design. The tiny 'copter made its maiden flight just 13 months after design and flew for

Army inspection a month and a half later. Primarily a military vehicle, Model 269A is representative of the intensive helicopter activity at Hughes . . . which promises bold new ideas in coming commercial, private and governmental helicopters.

**GOING UPI** Top ranking military officers and government officials have flown in the 269 prototype and observed the craft go through its paces at the Hughes Culver City, California plant. Close-up illustrates simplicity of construction and basic concept which makes the 269A easy to maintain, economical in first cost and operation.



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when consideration is given to the fact that over forty per cent of the cargo for the initial move of an army overseas consists of tracked or wheeled vehicles.

The value of this type of ship was dramatically illustrated by an incident which occurred during World War II. During one phase of the seesaw struggle between the British and German forces in North Africa the British lost most of their armor in the Tobruk area. It was a crucial moment and very little stood between Rommel and Alexandria. An urgent appeal was sent to the United States, and General Somervell agreed to send immediately the equipment for an armored division. A large portion of this equipment was loaded on the Seatrain Texas, a ship which had been built to carry railroad cars in the commercial coastwise service. The Texas made the major portion of her trip without escort and delivered her cargo in time to thwart the German attack. The availability of this ship and her historic voyage contributed immeasurably to the subsequent victory of the British Eighth Army.

Roll-on-roll-off ships have an essential function in the rapid out-loading of initial equipment of early deployed units. But their peacetime uses are somewhat limited. Being specifically designed for carrying vehicles, they are poorly suited to the transport of general cargo. Thought has been given to loading cargo in van type trailers for overseas movement on such ships. This, however, results in very poor utilization of ship space and on long voyages this loss offsets savings effected in loading and unloading charges. Another drawback is that such ships must have specially designed terminal facilities.

#### **Lift-on-lift-off ships**

A much better solution for general cargo movement is emerging in the commercial development of lift-on-lift-off ships. These ships are designed to handle containerized cargo. The most promising development so far from a military standpoint is being undertaken by McLean Industries, Inc., which operates the Pan-Atlantic Steamship, Co., on the Atlantic and Gulf Coasts.

During the past year Pan-Atlantic has been operating a fleet of four T-2 tankers equipped with spar decks, between New York and Houston, Texas. On the spar decks they loaded 60 specially designed trailer bodies similar to those which are used by commercial trucking firms throughout the country, except that these are uniquely designed to permit the quick removal of the body from the chassis so that only the body is carried aboard ship. This service proved to be very successful and, based on their experience and traffic surveys, McLean Industries is now in the process of converting six C-2s for transporting such containers. Four of these ships are already in operation and all six should be in operation by March 1958. Additional ships may be converted or constructed later if justified by the volume of business available.

Each of these vessels carries 226 trailer bodies or, in terms of average military cargo, they are capable of

moving a pay load of 5,040 short tons of cargo per voyage. They are equipped with traveling gantry cranes on their fore and aft decks which are capable of lifting loads of twenty-five tons from the ship's hold and depositing them ashore. While they are specifically designed to carry a standard container, they are adaptable to the transport of vehicles, palletized cargo or other types of containers by the use of floats thirty-five feet long by eight feet wide which would fit into the guides in the holds which retain the trailer bodies.

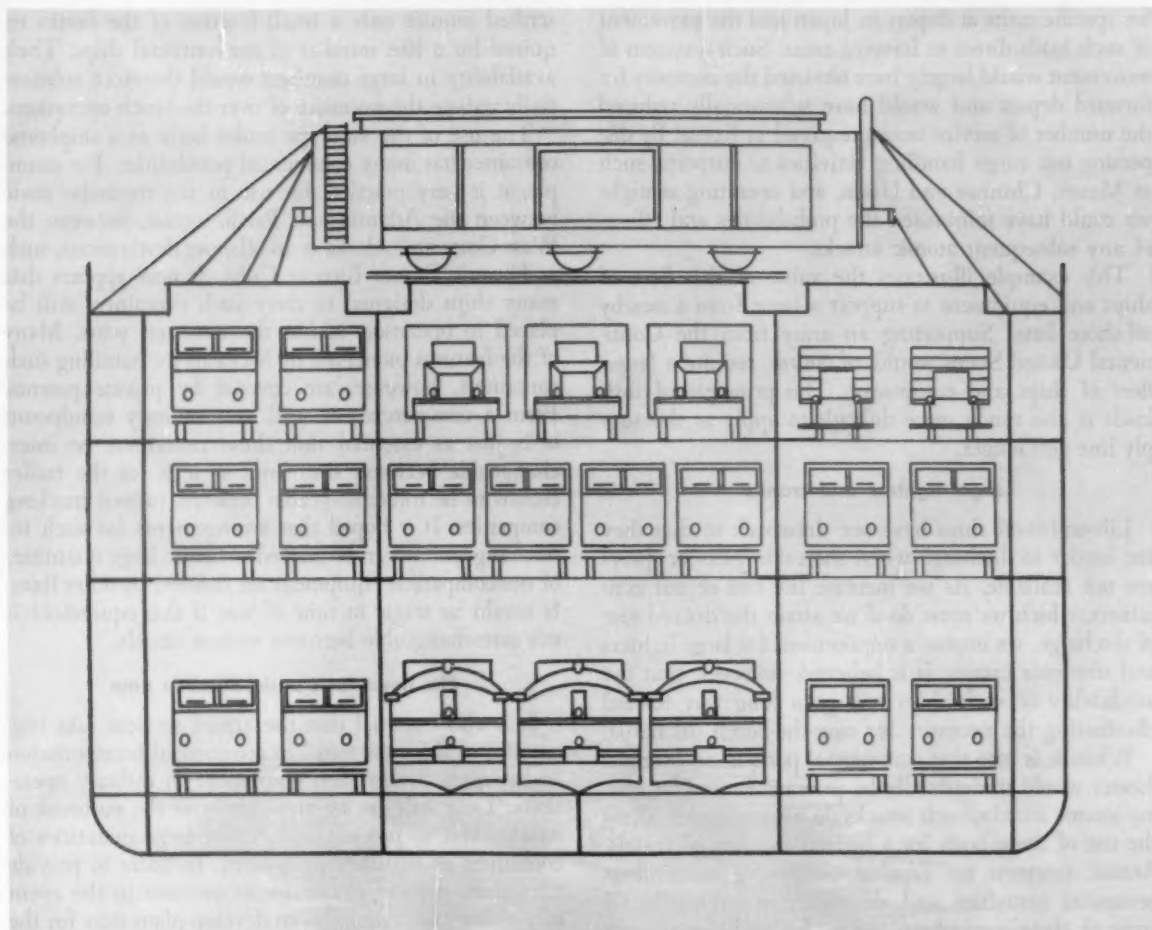
Let us pause for a moment to see how closely these ships conform to the specifications of an ideal cargo vessel as described earlier in this article. A C-2 is capable of maintaining a sustained speed of fifteen and one-half knots and greater speeds for short periods. It has a cruising radius of 3,000 miles. It is hoped eventually that these ships can be unloaded and reloaded with empty containers in a period of ten to twelve hours. Presently in actual practice a considerably longer period is required, but the crews are still being trained, equipment is being tested, and the urgency for speed is less than would exist under combat conditions. A crew of only thirty men is required to load or unload these ships and all of the technicians in such crews can be carried aboard. Obviously, these ships have a profitable commercial employment so defense funds are not required for their peacetime maintenance. In addition to the ships themselves, McLean Industries has a fleet of 3,200 special 35-foot trailer bodies, 2,100 special trailer chassis, and 200 tractors in service. The trailers have standard commercial characteristics which permit their being interchanged with other commercial motor lines, and a number are equipped to carry refrigerated cargo on ship and ashore. The capabilities of these ships are still somewhat short of our ideal wartime specifications, but they are much better than anything developed to date. This fleet of ships and highway equipment is capable of moving the dry cargo requirements of a very substantial task force.

#### **Supporting Korea from Japanese depots**

During the Korean conflict we were extremely fortunate in being able to maintain air superiority over our lines of communication and, of course, atomic weapons were not employed. One thermonuclear weapon, however, properly placed at certain periods could have destroyed hundreds of thousands of tons of shipping and most of our depot system in the Pusan area.

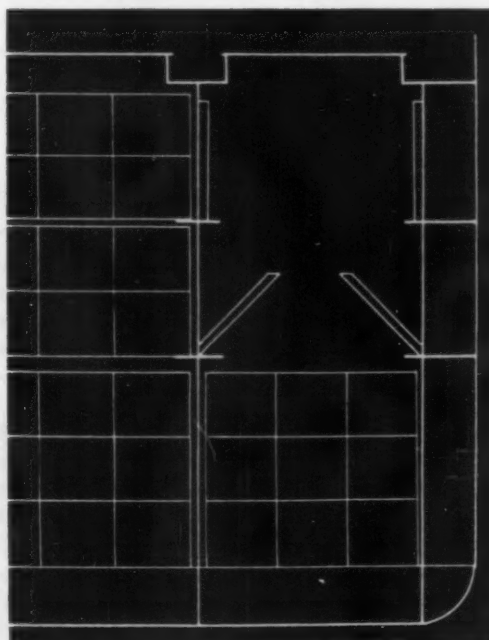
If Pusan had been subjected to atomic attack and we had had McLean's ships and equipment at our disposal we could still have supported our forces in the perimeter from depots in Japan. Roughly speaking, one of these ships on a short run such as between Japan and Korea is capable of moving the dry cargo requirements, except certain engineer construction materials and vehicle replacements, of one division plus its normal slice of supporting troops. The use of this special highway equipment would have permitted preparation of loads





### VERTICAL LOADING OF STANDARDIZED CONTAINERS

Among new designs which look particularly interesting from the military cargo standpoint is one proposed by the firm of Friede & Goldman of New Orleans for use by the Delta Line in their trade between the Gulf Coast, South America and West Africa. This vessel has very wide hatches which permit cargo to be loaded or unloaded very rapidly by eliminating the laborious and time consuming efforts of stowing cargo in the wings. Each of the cargo holds is divided into three vertical cargo compartments. The ship has two 'tween decks (see drawing above) but the decks themselves fold back against the sides of the cargo compartments (see drawing at right) thus permitting cargo to be lowered directly to its stowed position with little or no lateral movement being required. The dimensions of the cargo compartments were deliberately chosen to accommodate full loads of the standard Army CONEX Containers with a minimum loss of space. Some of the cargo compartments will also accommodate large containers such as the McLean trailer bodies. It is estimated that ships of this type could discharge a complete load of vehicles in about two hours. Approximately ten hours would be required to discharge a complete load of CONEX Containers or palletized cargo. The illustrations on this page show the versatility of these ships in handling various types of cargo.



for specific units at depots in Japan and the movement of such loads direct to forward areas. Such a system of movement would largely have obviated the necessity for forward depots and would have substantially reduced the number of service troops required in Korea. By dispersing our cargo handling activities to outports, such as Masan, Chinhae and Ulsan, and operating at night we could have minimized the probabilities and effects of any subsequent atomic attacks.

This example illustrates the value of this fleet of ships and equipment to support a force from a nearby off-shore base. Supporting an army from the Continental United States would, of course, require a larger fleet of ships and equipment. The principle of unit loads is also much more difficult to apply as the supply line gets longer.

#### Larger lighters and cranes

Lift-on-lift-off ships have one drawback in that they are harder to discharge when shoreside piers or quays are not available. As we increase the size of our containers, which we must do if we attain the desired rate of discharge, we impose a requirement for large lighters and shoreside cranes. It is believed, however, that the availability of such ships will go a long way toward eliminating the necessity for over-the-beach discharge.

While it is true that commercial ports in an overseas theater would undoubtedly be primary targets for enemy atomic attacks, such attacks do not necessarily deny the use of these ports for a limited number of vessels. Atomic weapons are capable of causing tremendous personnel casualties and destroying substantially all types of above-ground structures. An air burst of even a very large yield weapon, however, would not substantially alter the basic configuration of a harbor, nor would it be likely to seriously damage masonry quays and breakwaters such as exist in most harbors in Europe and the Orient. It is difficult to visualize situations where we could not restore a few open berths for operation within a few days following an atomic attack, providing that trained engineers and equipment were available to clear the area of debris. Due to their faster rate of discharge, lift-on-lift-off ships of the type de-

scribed require only a small fraction of the berths required for a like number of conventional ships. Their availability in large numbers would therefore substantially reduce the necessity of over-the-beach operations.

The use of the van-type trailer body as a shipborne container has many commercial possibilities. For example, it is very practical for use in the coastwise trade between the Atlantic and Pacific coasts, between the West Coast and Alaska or to offshore destinations, such as Hawaii, Puerto Rico or Cuba. It now appears that many ships designed to carry such containers will be placed in operation within the next ten years. Many of the features pioneered by McLean for handling such containers, however, are covered by private patents. From a commercial, as well as a military standpoint, it is just as essential that these containers be interchangeable between ship lines as it is for the trailer chassis to be interchangeable between various trucking companies. It is hoped that arrangements for such interchangeability can be arrived at before large quantities of noncompatible equipment are ordered by other lines. It would be tragic in time of war if this equipment is not interchangeable between various vessels.

#### The need for standardization now

It is also essential that the armed services take cognizance of this new trend in commercial transportation and prepare to use such equipment in military operations. Time will not be available after the outbreak of another war to procure and deliver large quantities of containers or highway equipment. In order to provide immediate support to our forces overseas in the event of war it appears desirable to develop plans now for the utilization of this available commercial equipment similar to the plans for utilization of commercial aircraft.

The McLean container has certain definite advantages for adoption as a standard in that it is the largest van-type trailer body that can be moved on the highways in all forty-eight states. While it could be adopted as standard for our coastwise trade it may be too large for certain offshore trades. For such trades, however, it should be possible to adopt standard smaller containers, multiples of which would occupy the same space as a single McLean container. Many of the foreign trade lines are also considering adopting the principles of vertical loading and possible use of containers on new ships which they will construct shortly.

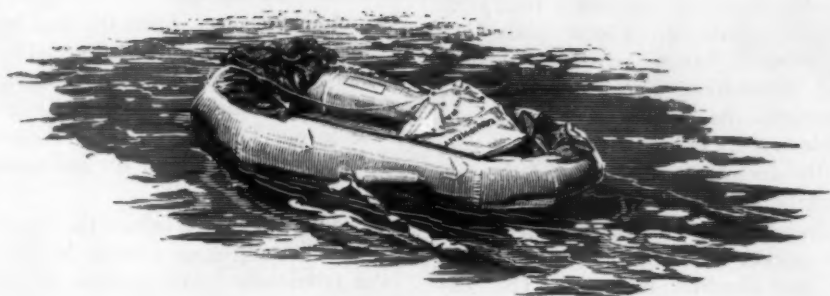
We are therefore at a very critical stage in the development of our future American Merchant Marine. From a military standpoint, it is extremely important that the armed services and the transportation industry work hand in hand during this development period and agree on standards for equipment to be used in peace and in war.

Thanks to the courage and initiative of American private enterprise we are making progress, but this very important segment of our national defense requires continuous attention if we are to attain the capability of supporting our forces on future atomic battlefields.



**Major General Norman H. Vissering, USA,** commands the Army Transportation Terminal Command for the Gulf at New Orleans. One of the group that organized the Transportation Corps in 1942, for the first two years of World War II, as Chief of Ocean Traffic, he coordinated the flow of cargo overseas to match available shipping. Later, in the G4 Division of SHAEF, he helped

prepare the movement portions of plans for invading Europe, and was Deputy G4 for ETO. In Korea General Vissering was CG, Pusan Military Post and Port, and the last commander of KCOMZ.



**FORMER OCCUPANT: BACK TO DUTY . . .** Nothing galvanizes the Navy into action quicker than the word that a plane is down in the water. A Navy search and rescue operation is amazing in its efficiency and heart-warming in its purpose. To the United States Navy, every man jack who wears the uniform is as important as the last man on earth. Because of this fierce determination to deny Davy Jones at every possible turn, Navy search and rescue teams have written some of the finest chapters in the Navy's proud log . . . and Kaman rescue helicopters have been right there with them . . . ready and waiting.

THE **KAMAN** AIRCRAFT CORPORATION

BLOOMFIELD, CONNECTICUT

## NEW AIR-GROUND OPERATIONS TRAINING TEXT

(Continued from page 28) establishment of a field army combat zone wherein the army commander is primarily responsible for all combat operations. This zone extends one hundred miles forward of, and one hundred miles to the rear of, the line of contact. Air Force operations conducted within this zone are in support of the field army.

Another major change is the elimination of tactical air command (TAC) headquarters from an area of operations. The tactical air force (TAF) commander is responsible for a geographical area some three hundred miles wide and five hundred miles deep. Under this concept, the basic air-ground team is the army group-tactical air force rather than the field army-tactical air force to which we were accustomed in the past. This change allows greater dispersion of Air Force installations, reduces the number of headquarters establishments in an active area, and expedites joint coordination by eliminating one command echelon.

Under the new system, air-ground planning begins at army group-tactical air force level based upon missions assigned by the respective component force commanders. Planning is coordinated at army group-TAF level through command liaison and normal inter-staff exchange of information. The tactical air force commander determines the amount of air effort he will make available to army group based upon mission, forces available, the enemy air situation and the pre-planned requirements of army group. Basically, these preplanned requirements are a consolidation of the field armies' air support requirements, forwarded to army group after joint coordination between TSC and ASOC at army level.

The air effort made available to the army group is allocated to the several ASOC by TAF based upon priorities established by the army group commander. This allocation is for a stated period—three days, ten days, or duration of the operation—depending on the local situation, and is expressed in terms of sorties per day. Once this allocation is made, TAF designates which wings or squadrons will support each field army and passes operational control of these units to the ASOC concerned.

Detailed plans for employing tactical air in support of the field army are made by the field army TSC and the ASOC. These two agencies are located close to each other at army headquarters and maintain continuous coordination through duplicate tactical display panels and personal contact. Air support requirements originating at lower levels are passed up through channels to TSC.

Air support requests are reviewed at TSC. Those considered appropriate air-support targets are passed to ASOC as field army requirements for tactical air support. ASOC then becomes responsible for scram-

bling aircraft, directing them to the target area, and reporting results of the mission to TSC.

These same channels and procedures are employed for both preplanned and immediate missions, and for both close air support and tactical air reconnaissance.

If emergency needs develop for tactical air support over and above the tactical air effort initially allocated to ASOC, additional tactical air effort is obtained in one or more of these ways:

- ¶ At the request of ASOC, TAF can provide additional air effort, on a temporary basis, by utilizing reserve aircraft, or aircraft aborted on other missions because of weather or other conditions.
- ¶ Aircraft may be diverted from less urgent missions.
- ¶ Emergencies in a particular field army area can be met by reallocating effort to the ASOC with approval by the army group commander.

### Close air support

We have taken a new look at the type of close air support the Air Force will be called upon to provide in the future. As a result, the definition of close air support in the current joint dictionary has been revised. The new one says that close air support is the application of air firepower within the field army combat zone against targets that can interfere with the combat operations of our forces. The old definition described close air support as the attack on hostile targets that are so close to our forces as to require detailed integration of the air mission with the fire and movement of friendly forces.

The new definition reflects the Army's ability to provide greater and more accurate long-range fire support close to friendly forces than can be provided by high-altitude supersonic aircraft now in production for TAC.

Apparently the old problem of divergent service views regarding command relationships in air-ground operations has been solved through compromise. ASOC, while still reporting direct to the TAF commander, is solely responsible for providing direct support to the field army, and for all practical purposes, ASOC is completely divorced from all other TAF operations.

Thus the Air Force retains full control of its air effort but accepts a direct-support role within the field army combat zone comparable to the relationship between an infantry unit and its direct-support artillery. This appears to be a reasonable and workable solution.

The new manual allocates tactical air reconnaissance to the ASOC for support of the field army, based upon priorities established by the army group commander. Aerial photographs by tactical air in support of the field army are delivered direct to army headquarters for processing, reproduction and distribution.

Normally, exposed film is air-dropped near the army's air reconnaissance support battalion. This allocation of tactical reconnaissance in support of the field army provides the army commander with target-acquisition



## West Germany orders 26 H-21 helicopters for its defense forces

With its order for 26 H-21 helicopters West Germany became the fourth NATO nation to acknowledge the ability of Vertol's Work Horse to do the heavy lifting and hauling that cannot be accomplished by any other vehicle.

In the far north, beyond the range of trucks and trains, H-21's are prime movers in construction of early warning sites. For the Canadian, French and U.S. military services across the world, H-21's have flown scores of thousands of hours in high performance missions. Rugged, reliable, independent of prepared landing fields, they draw the assignments no other vehicles can handle.



Engineers, join Vertol's  
advanced engineering team!

# VERTOL

## Aircraft Corporation

MORTON, PENNSYLVANIA

The H-21 or its civilian counterpart, the Vertol Model 43, can lift 20 men or 2½ tons of cargo. It is the only available helicopter capable of towing land or sea vehicles safely and satisfactorily. Tandem rotors eliminate problems of load placement because of the large permissible travel from the center of gravity.

In the logistics of peace or war, the Vertol H-21 is a key to the missions too difficult for surface vehicles and airplanes.

In defense, in industry, Vertol helicopters set the pace. Theirs are Skyways without Runways.

and post-strike analysis throughout the field army combat zone. Delivery of exposed film to army for processing should cut by one or two hours the time gap between requests for photos and delivery of prints. Tests have been successfully conducted with a 70mm camera system with ejection magazine for parachute delivery.

#### Air-delivered atomics

The tactical air force commander, consistent with the priorities of other assigned missions, allocates air-delivered nuclear weapons to ASOC for support of the field army. For each air-delivered nuclear mission, TSC specifies the target, results desired, time on target and desired ground zero. It also recommends height of burst and desired yield. Any change from TSC's specifications or recommendations must be coordinated with TSC before delivery on a "go-no-go" basis. Interservice coordination of nuclear weapons delivery by organic army means is done through preplanning and notification. The commander having authority to fire is responsible for notification, both unilaterally and to other services, by not less than fifteen minutes before TOT.

At army level, notification of the decision to employ an atomic weapon is forwarded by TSC to ASOC. At corps and division level, notification is through Air Force and/or Navy liaison officers responsible for notifying their respective services. Air Force nuclear weapons are delivered in the combat zone only at the request of the field army commander or, in the case of a target selected by Air Force, only after prior coordination with the field army. Beyond the combat zone, coordination is required for weapons delivered by air in either of two classes: surface or subsurface bursts, and strikes against facilities or installations of future tactical value to the army commander.

TAC agrees that in the field army's combat zone, the army commander, employing organic means, is responsible for air defense of his units and installations, subject only to the coordinating procedures as prescribed by the area air defense commander. These coordination procedures are predicated on these basic principles:

- ¶ Each service is responsible for the internal control and coordination of its own forces or weapons.
- ¶ The capabilities of air defense systems normally dictate the use of only two aircraft identification modes, *hostile* and *friendly*. Aircraft not identified as friendly will be instantaneously considered hostile.
- ¶ Basic responsibility for adhering to air traffic control and aircraft identification rules rests with the aircraft pilot. Non-adherence will result in identification as hostile.
- ¶ Army air defense means in the combat zone will normally engage hostile aircraft and missiles at maximum ranges of organic weapons.
- ¶ Minimum restrictions must be imposed on operating forces with the corollary that reasonable calculated risks must be accepted.

Under the terms of this agreement, the field army

commander retains full control of organic weapons and is primarily responsible for air defense within his combat zone.

#### Interdiction

The tactical air force engages in interdiction activities throughout the combat zone and into enemy-held territory to maximum-range capabilities. Within the combat zone, ground targets are attacked only if specifically requested by the field army commander or after coordination with him. This concept recognizes the primary responsibility of the field army commander for interdiction within his combat zone.

Conversely, the new doctrine recognizes the primary responsibility of the tactical air force commander for interdiction in the area beyond the combat zone or, in other words, more than one hundred miles forward of the line of contact.

Revision of the Wilson memoranda, announced as a possibility by Secretary of Defense McElroy, may give the Army the green light to develop and employ surface-to-surface missiles with ranges up to five hundred miles. Such a development would push the forward limit of the combat zone well beyond the one hundred miles specified in the new manual and would alter current Army requirements for tactical air reconnaissance support. However, within the time frame to 1962 specified for use of this manual, a foundation is provided for developing optimum teamwork in joint air-ground operations.

Conspicuous by its absence is any reference to the ground liaison officer of World War II. Undoubtedly he became a casualty of the time-and-space factors associated with modern atomic warfare. The dispersion required for passive defense against atomic effects and the speed with which modern tactical support must be executed rule out conventional briefing and de-briefing at reconnaissance and fighter-bomber fields. In the future, reconnaissance and fighter-bomber pilots will scramble from airfields deep in rear areas, be briefed while following a course dictated by ASOC over radio, and be vectored into the target by forward air controllers or by radar.

Obviously the new air-ground procedures have substantially streamlined the air-ground operations and control system with a resulting increase in effectiveness. The Joint Operations Center, having far outlived its usefulness, had been criticized by both services. Air Force acceptance of a purely support role within the field army's combat zone eliminates the problem of command relationships. Also of obvious import is the advantage of having a senior Air Force officer (the ASOC director) on the ground where he is intimately associated with the force he is supporting and has direct contact with the commander of the supporting tactical air force.

While the new *Joint Air-Ground Operations* contains minor omissions and discrepancies, it provides a valid and progressive basis for joint air-ground training and, in case of future conflict, for tactical operations.

*Preserver of Peace...*

# BOMARC



*Official U.S. Air Force Photo*

## ***It tracks down an enemy at 300 miles***

Described as the most potent of all ground-to-air defense missiles, the Bomarc pilotless interceptor, designed by Boeing, stands poised for the destruction of any "enemy" bomber within a 200-300 mile range. Its booster rocket has the power to hurl it more than 60,000 feet straight

up; then, powered by two ramjet engines, it hurtles by electronic instinct to its target at up to 3 times the speed of sound. For this guardian of our homes and way of life, RCA has been privileged to supply important advance components of the guidance system.



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***RADIO CORPORATION of AMERICA***

DEFENSE ELECTRONIC PRODUCTS

CAMDEN, NEW JERSEY

(Continued from page 16) from the PX system. This amounted to \$25.6 million in 1957, ninety-five per cent of it spent on overseas operations. If they should be successful it would mean that next year the Post Exchange system would have only about \$30 million to contribute to these essential welfare activities, and taxpayers would have to make up the difference. This would not, of course, destroy the Post Exchange system, but it would certainly encourage the anti-exchange group to continue to harass the PX system, by making it more difficult to operate and by forcing it to contract its operations rather than to expand them to provide the essential needs of its customers—the men and women of the armed services and their dependents.

Most regular members of the Army and Air Force today are married and are raising families. The Exchange Service has noted a distinct and unmistakable demand for family-type items rather than the simple requirements of single men living in barracks. This indicates the important task of the Exchange Service in maintaining the morale and esprit of Army and Air Force families. Insufficient PX services are a definite factor in the high rate of turnover of skilled soldiers and airmen due to the dissatisfaction of service wives who cannot buy what they need for their families at a nearby PX and at a moderate price. If the Service is to perform its assigned mission, its services must expand.

## GENERAL OFFICER SHIFTS

Lt. Gen. EMERSON L. CUMMINGS to Eighth Army . . .  
Lt. Gen. CHARLES D. PALMER to Sixth Army . . . Lt.  
Gen. THOMAS J. H. TRAPNELL to I Corps . . . Lt. Gen.  
ARTHUR G. TRUDEAU to Chief of R&D . . . Maj. Gen.  
FRANK S. BESSON, JR. to Chief of Transportation . . . Maj.  
Gen. JOHN F. BOHLENDER to Fitzsimons AH . . . Maj. Gen.  
CHARLES E. HOY to MAAG, Iran . . . Maj. Gen. DOUGLAS  
V. JOHNSON to OJCS . . . Maj. Gen. OLAF H. KYSTER,  
JR., to 5th Region, USARADCOM . . . Maj. Gen. WIL-  
LIAM H. NUTTER to JUSMAG, Philippines . . . Maj.  
Gen. CLARK L. RUFFNER to Third Army . . . Maj. Gen.  
RICHARD W. STEPHENS to Sixth Army . . . Maj. Gen.  
WILLIAM C. WESTMORELAND to 101st Airborne Division  
. . . Brig. Gen. BEN HARRELL to Eighth Army . . . Brig.  
Gen. THOMAS J. HARTFORD to Madigan AH . . . Brig. Gen.  
HIRAM D. IVES to Eighth Army . . . Brig. Gen. I. SEWELL  
MORRIS to Military Traffic Management Agency . . .  
Brig. Gen. CHARLES W. G. RICH to 101st Airborne Divi-  
sion . . . Brig. Gen. JACK W. SCHWARTZ to Tripler AH  
. . . Brig. Gen. TOM R. STOUGHTON to ODCSPER . . .  
Brig. Gen. REUBEN H. TUCKER, III, to OTAG.

*Retirements.* Lt. Gen. JAMES M. GAVIN . . . Lt. Gen.  
LEMUEL MATHEWSON . . . Maj. Gen. GEORGE B. BARTH  
. . . Maj. Gen. JAMES C. FRY . . . Maj. Gen. EDMUND C.  
R. LASHER . . . Maj. Gen. PAUL F. YOUNT.



In the "old" Army the "Umpteenth Mess Kit Repair Co." was a standing joke of barracksroom wits. But here's evidence that it exists in the age of missiles and atomics. The repairman is Pvt. Terrance McCaffrey of the 7763d Direct Support Co., 2d Quartermaster Group stationed in Germany.



# *Transac* miniature computer...



FIRST WITH THE ARMED FORCES SINCE 1956

## PERFORMS COMPLEX FLIGHT CONTROL INSTRUCTIONS ... EVERY 30TH OF A SECOND!

Now a high speed airborne computer that slips like a desk drawer into the nose of a supersonic Navy jet fighter and processes digital data derived from analog information *in split seconds*. TRANSAC—a completely transistorized control system—eliminates vacuum tubes, diodes and other bulky com-

ponents of ordinary digital computers. Philco is proud to have met the exacting standards of the Navy Bureau of Aeronautics. Industry too is watching the TRANSAC® computer with its high speed data processing capabilities make phenomenal contributions to business planning and operations.

*At Philco, opportunities are unlimited in electronic and mechanical research and engineering.*

# PHILCO®

**Government & Industrial Division**  
4724 Wissahickon Ave., Philadelphia 44, Pa.

*This advertisement originally appeared in November, 1956*



Miniature printed circuit cards, heart of the Transac Computer, contain all the elements for arithmetic and control functions.

TRANSAC—trademark of Philco Corporation  
for Transistor Automatic Computer

# Irons in the Fire

## Superfast Color Film

Anso now has on the market a color film so sensitive that an ordinary kitchen match gives enough light for picture-taking. Ten times faster than conventional color films, Tungsten Type Super Anscochrome has an official exposure index of 100 with normal processing. Initially this new film will be distributed in twenty-exposure, 35mm size only.

## Fashions For Firefighters

Recent tests in the northern California forest region proved the value of newly developed, expendable, aluminized paper protective suits and a new emergency water-supply system for firefighters.

The protective suits, made by the Quartermaster Corps on Engineer R&D Laboratories design, consist of parkas with hoods, face masks, leg sleeves, and mittens, all of aluminized kraft paper treated with a flame retardant.



Paper-suited firefighters

The tests showed that men wearing the suits over duty uniforms could stand within two feet of a forest fire for two or three minutes without discomfort, although the heat was so intense that exposed parts of helmet liners were blistered.

The emergency water-supply system is made up of lightweight piping and hose, and an electrically driven submersible pump. Inexperienced soldier firefighters from Fort Lewis, Wash., were able to couple 1,000 feet of pipe in three and one quarter minutes and the pipe was laid to a water supply by a helicopter flying at treetop height. This system also was designed by Engineer R&D Laboratories' Firefighting Branch.

## "Automatic Single-Shot" .22

A low-priced, quality caliber .22 rifle has been developed by the Winchester-Western division of Olin Mathieson Chemical Corp. It combines the key safety features of a single-shot rifle with the convenience of an automatic. The new Model 55 is called an "automatic single-shot" because all the shooter has to do is load through the loading chute on the top of the receiver, take off the safety, shoot, and repeat the process. Once the rifle has been fired there is no need to cock it unless the trigger has been snapped on an empty case or without a round in the chamber. Loading the rifle automatically puts the safety on, and it must be released before the rifle can be fired. The rifle retails for less than \$25.

## Chrysler Missile Division

A new division has been formed by Chrysler Corporation to handle its participation in the Army's Redstone and Jupiter missile programs. The new missile division will operate the Government-owned plant in the Detroit area which is the center of Redstone and Jupiter production.

## Assault Boat Contract Let

A \$1,053,428 contract for production of the Army's newly designed plastic assault boat has been awarded to Correct Craft, Inc. The lightweight boat (less than 300 pounds), of reinforced Fiberglas plastic construction, measures 16 feet 4.5 inches long by 5 feet 4 inches wide. It was designed by the Army Engineers for assault crossings of streams, rivers and other water obstacles.

## Double-Duty Riflescope

A new riflescope offers an instantaneous choice between cross hairs or post, both in one reticle. D. P. Bushnell and Company's Command Post riflescope has conventional cross hairs, plus a tapered post which can be raised into position when needed by flipping a lever situated near the windage adjustment. The post, when raised, snaps into perfect alignment with the horizontal cross hair and bisects the vertical cross hair.

## Hard Hat Hunt

Army pilots and crewmen at present have no helmet of their own. In a move to replace

the prevalent baseball-type cap and protect Army airmen's heads against bumps and bruises, the Army Quartermaster Corps and the Army Signal Corps Engineering Laboratories have been working to develop a hard hat with the electronic communications elements needed by the men who fly the noisy helicopters and light fixed-wing aircraft. As a start, the Army borrowed a few Navy helmets for study in working out the design of the shell shape.

The communications package requirements include a dynamic, noise-cancelling microphone with universal action allowing it to be mounted on either side of the helmet and to be swung away from the face; and dynamic earphones with cushions to inhibit noise, adjustable to head size. An initial contract for 300 helmets has been awarded Mine Safety Appliance Co., protective helmet experts. These will undergo extensive testing by Army flyers in Europe. Long-range



The new and the old in Army flyers' headgear

research continues on a helmet which will also provide protection against shell fragments and small-arms fire.

## Turbojet Boosters

One of the major problems in the launching of ballistic missiles or future space vehicles may be solved through the use of air-breathing engines such as the turbojet in recoverable first-stage booster units. According to John B. Montgomery, general manager



Proposed turbojet booster for space missiles

of General Electric's Aircraft Gas Turbine Division, "the good economics of turbojets will make them excellent first-stage engines. Once the missile or space vehicle has been accelerated through the dense layers of air near the earth's surface, then a rocket engine would take over the job of propelling it the rest of the way." He pointed out that rocket engines must carry aloft sizable quantities of fuel and of their own oxygen, thus making launching far more difficult. A turbojet, on the other hand, takes its oxygen from the air as it goes, and so does not have to overcome the inertia of its own oxygen load as does the rocket. After separation from the missile, air-breathing booster units could be recovered by flying them back to their bases and so could be used over and over again, whereas first-stage rockets usually cannot be recovered in suitable condition for reuse.

Mr. Montgomery added that another advantage would be the excellent mobility of the turbojet boosters, which could be flown almost anywhere by themselves. This would allow a wider dispersal of launching sites, unrestricted by the need for transportation and ground-handling facilities as are the huge rocket-engine first stages.

## Cold Storage

Aviation gasoline improves in quality when stored in pits carved out under the Arctic icecap. Stored for seven months in the 1,200-foot tunnel carved out under the icecap by Army Engineer arctic researchers, a test quantity of the fuel, which evaporates rapidly and takes on impurities under normal climatic conditions, not only did not evaporate but contained less moisture as a result of the constant low temperatures. In the 1957 portion of the continuing ice-tunnel studies the researchers made use of automatic coal-cutting machines and compressed-air tools to carve out storage pits and enlarge the length and width of the tunnel.

## Pocket-Size Mine Detector Pack

The Army Engineer Research and Development Laboratories have produced a mine detector equipped with transistors in place of vacuum tubes. The new model weighs only 7 pounds, one fourth as much as the detector presently in use, and has four times the battery life of the standard model. Besides reducing the over-all weight, sensitivity has been increased, stability has been improved and maintenance has been so simplified that operators can make major repairs in the field.



Mine-detector packs, old (above) and new



The major weight reductions are in the electronic assembly carried on the operator's back. In the new model this is a packet only 7 inches by 5 inches by 1 inch which is worn on a standard military pistol or cartridge belt. The unit consists of four hermetically sealed plug-in subassemblies each containing several transistors and their associated wiring. Repairs can be made simply by removing and replacing one or more of these compact subassemblies.

Built under contract by Texas Instruments, Inc., the new detector has passed all engineering tests and is now due for field testing.

## New MSTS Radars

The Military Sea Transportation Service has purchased forty new Raytheon Manufacturing Co., maritime radars at a cost of \$385,000. The new radars, Raytheon's Mariner's Pathfinder 1402 commercial model, will replace worn-out units no longer economical to maintain. This model is already operating aboard more than two thousand commercial ships the world over and has proved extremely reliable under the most hazardous conditions. By adopting a successful commercial model rather than developing a new unit, MSTS estimates it will save more than a million dollars on the first forty units and more on future purchases. Further savings in time and money are expected to result from the use of Raytheon's worldwide service organization. The need for stockpiling spare parts will be eliminated, for periodic maintenance and possible needed on-the-spot repairs can be made in any of 168 major ports in more than fifty countries.

## Top Spinner No Toy

The Army Jupiter-C missile which successfully sent the United States' first earth satellite into space was equipped with a special "spin-launcher" in the nose section of its Redstone first stage. Working with the Army Ballistic Missile Agency, the Reynolds Metals Co. designed and built the special Jupiter-C first stage nose section which holds the second and third stages of the missile in a bucket-like container. When the moment arrives for the later stages to start off on their own, the "spin-launcher" gives them a rotary motion to keep them on course. Reynolds makes airframes for the Jupiter-C and has been fabricating the ballistic shell of Redstone since 1952.

Spin-launcher for Jupiter-C



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## THE ARMY'S MONTH

The Army's new solid propellant missile has been named after the First World War's General John J. Pershing. The Pershing, soon to be under development, will succeed the Redstone, retaining all of that missile's accuracy and field worthiness, at the same time being smaller, lighter, and more mobile.

Project "Long Arm," a test designed to teach tactics and techniques in using higher performance observation planes in field operations, was held in February at the United States Army Infantry School. Three T-37 twin-jet trainers on loan from the Air Force were used in the tests.

In Germany recently the 502d Engineer Company ferried the Army's heaviest artillery weapon, the huge, 85-ton 280mm gun, across the swift Rhine River on a specially built ponton raft. Designed by Capt. Edward Scharff, commander of the 502d, the new raft was assembled in less than three hours. It is a rearranged version of the standard M4 11-ponton raft and has five pontoons at each end of the deck and one in the center. The M4 requires special building equipment and specialized knowledge, and experience with its complicated construction. The 280mm gun was returned across the river on a Class 60, float-type raft made up of 11 inflated rubber rafts and conventional decking.

A new training film on "Trainfire I," the Army's newly adopted method of marksmanship training, is available at Signal Corps central and major film exchanges. The twenty-minute color film points out deficiencies in the old method of training and shows the advantages and new procedures of the new method.

Training of the first Nike Hercules missile battalion has begun at Fort Bliss, Texas. Hercules is big brother to the Nike Ajax, with considerably greater range, altitude, speed and killing potential. It can carry either conventional or atomic warheads. The Hercules training program will involve both the training and activation of new units and the retraining and conversion of Nike Ajax battalions to the Hercules, and will be far more extensive than the Nike Ajax training. The expected input of students will result in a peak load at the Air Defense School of some ten thousand students as compared with last year's peak of three thousand and the current five thousand.

The Army Corps of Engineers is acting as contractor, architect and engineer in the construction for the Air Force of the first BOMARC missile base. Designated an Employment and Suitability Test Base, the facility is under construction at Eglin Air Force Base, Florida, and will be used to test theories and functions which might be incorporated into later bases.

Final scores in the 1957 competition among ARADCOM Nike units for the ARADCOM Commander's Missile Battalion Trophy show that Seattle's 433d AAA Bn. is the winner. Based on results of the annual Nike practice firing at Red Canyon Range in New Mexico, the award makes the battalion the nation's top-rated surface-to-air missile unit. The 433d's high point total was 11,283 out of 12,000 possible points. Competition was close, as four battalions in all scored with eleven out of twelve missiles fired. The points scored were based not only on success of engagements but on efficiency and effectiveness of all operations of the battalion during firing of missiles. The top three Nike batteries and point scores were Battery A of the 865th AAA Bn., Los Angeles, 2991; Battery B of the 516th AAA Bn., Boston-Providence, 2985; and Battery C of the 433d AAA Bn., Seattle, 2984.



# THE MONTH'S BOOKS

## Truth plus Psywar

**HEROES BEHIND BARBED WIRE**  
By Colonel Kenneth K. Hansen  
D. Van Nostrand Company, 1957  
345 Pages; Illustrated; Index; \$5.95

Reviewed by

LT. COL. PAUL M. A. LINEBARGER, MI, USAR, who has written many articles and reviews for ARMY and whose Psychological Warfare is in its second edition.

One of the real dramas of American military history is the conversion to our side of "... the 14,343 Anti-Communist Brothers" who not only surrendered to us in Korea, but who embarrassed communism forever by refusing repatriation even under the elaborately fair conditions of Operation Big Switch. This book tells an important story, and tells it supremely well; told by an American soldier, it deserves a military audience.

Colonel Hansen was Chief of Psychological Warfare for the United Nations Command during the latter part of the Korean conflict; he succeeded the able and devoted Colonel Woodall Greene in that oddly complicated assignment and managed to maintain the high standard of performance and improvement which Greene had initiated. This was no easy task. It meant managing our across-the-line propaganda, evading political booby traps, catching enemies, converting them into friends, and then making sure that our own side did not turn them back to the Reds to be murdered just because they had become our friends. The story begins with our catching the Chinese prisoners and it ends, three and a half years later for many of these prisoners, with our saving them from their own Red government and sending them to a safe haven in Formosa.

The meat of the book is the struggle, waged at the conference table of Panmunjom and in the interrogation tents that followed, of the captive Chinese not to go from the freedom of being prisoners of war to the enslavement of being Communist citizens. He describes the rehabilitation programs on Kojima Island, outlines and evaluates the instructional and recreational courses which were set up for the prisoners, shows their unflagging Chinese resourcefulness in making themselves at home, and follows them through the crisis of the tents—the dreadful tents where men collapsed under emotional

stress alone, because one flap led to freedom and the other to death. Some men, under strain, could not remember which choice meant which.

*Heroes Behind Barbed Wire* has the full-bodied raciness of a Dickens novel. The story, though true, moves along as fast as good fiction. Colonel Hansen is an able writer, with a command of expressive English. Scenes and personalities spring alive in profusion. Humor is so frequent that some readers will remember it only for the droll stories and the belly laughs. The flavor of the book is affected by the fact that the author likes everyone; one even suspects him of liking some of the humbler Communists, like the little interpreter who got good shoes when an American observer deadpanned the Communists on their using shoes as an indication of rank. The neutral Swede with the flags in his cap is almost worthy of a Sergeant Bilko program.

Yet within this amusing book there is a profound lesson for every American soldier. Psychological warfare gets complicated and over-elaborate in peacetime; but when the shooting comes, psywar is just one more way to win. It's a good way to win; it can use truth; and in using truth it can save our former enemies for our own side, for humanity, and for themselves. Psywar is cheap, relative to other weapons, but it must not be used cheaply. Truth and honor go into it—the truth and honor of the U. S. Army. In Korea we used it well. This may be one of the reasons that Communists have chosen not to meet Americans in open battle since then. They may be afraid that we will make promises to their men and then keep those promises—as we did.

## Flags Up to Date

**THE FLAG BOOK**  
By Preben Kannick  
M. Barrows & Company, 1957  
196 Pages; \$3.50

Reviewed by

COL. FREDERICK BERNAYS WIENER, JAGC, USAR, a practicing attorney of Washington, D. C., who has written many articles and reviews for ARMY.

For once a publisher's blurb is true in every respect: "This is the most exhaustive book on flags to be offered in the world today." Here are nearly nine hundred colored illustrations of flags,

coats of arms, and badges. (How come the low price? The book was produced in Denmark, where printers have not yet priced themselves out of the market!)

This work is thoroughly up to date, and contains the colors of all the newest nations: the Malay Federation, Ghana, Libya, Morocco, Tunisia, and the Sudan. It covers a host of official flags flown by heads of state, government officials, and ranking military and naval officers. The flags of the states of the American Union, of the German states, and of the several "republics" making up the Soviet Union are also included. There is a full descriptive text, which in addition describes variants not pictured. The only omission noted is that of the flag of the District of Columbia—hardly, in all conscience, a vital or critical defect.

In short, if you're a flag fan, this it it.

## Marines at Chosin

**U. S. MARINE OPERATIONS IN KOREA, 1950-1953; Vol. III: The Chosin Reservoir Campaign**  
By Lynn Montross and Capt. Nicholas A. Canzona  
Government Printing Office, 1957  
432 Pages; Illustrated; Maps; Index; \$2.75

Reviewed by

LT. COL. EDWIN H. SIMMONS, USMC, who commanded Weapons Company, 3d Battalion, 1st Marine Regiment, during the Chosin Reservoir campaign.

The American public—even that segment that has a fairly large degree of sophistication in military affairs—seems to remember the 1st Marine Division's experiences at Chosin Reservoir as a combination of Dunkirk and Valley Forge. The essentials of the campaign, as remembered by most, are these: The Chinese forces vastly outnumbered the Marines; the OCF was better equipped, better conditioned for winter warfare; the encircled Marines were engulfed in a human sea of Chinese; the Marines, their ranks decimated and fighting against fearful odds, managed to break out of the trap and find their way to the sea where they were evacuated by a herculean effort by the Navy. Two of these impressions are, with some qualification, accurate enough. The others are quite false.

This volume of the Marine Corps' official history does much to set the record straight. Mr. Montross is a professional military historian, and Captain Canzona participated at Chosin. (The same pair

## Selected Check List of the Month's Books

*This run-down of some of the books received for review during the month preceding our deadline is to give our readers who like to follow current literature a monthly check list of the most important, useful and potentially popular books. Full reviews of some of these books may appear in this or subsequent issues. Any of these titles may be purchased through the Combat Forces Book Service. See page 83 for order coupon and a complete listing of Selected Books for Military Readers.*

**THE BACKGROUND OF NAPOLEONIC WARFARE.** By Robert S. Quimby. Columbia University Press, 1957. 385 Pages; Illustrated; Index; \$6.75. The development of tactical innovations through the writings of Puysegur, Follard, Saxe, Mesnil-Durand, Bourcet, Joly de Maizeroy, Pirch, Vausseux, Guibert and Du Teil. A thoroughgoing study.

**THE CHALLENGE OF THE SPUTNIKS.** Edited by Richard Witkin of *The New York Times*. Doubleday & Company, 1958. 96 Pages; Illustrated; \$1.50. In the words of President Eisenhower, Bernard Baruch, Edward Teller, Thomas K. Finletter, Charles E. Wilson, Trevor Gardner, and others.

**DEW LINE.** By Richard Morenus. Rand McNally & Company, 1957. 184 Pages; Illustrated; Maps; \$3.95. A forthright job of describing our Distant Early Warning Line, which includes descriptions of the Mid-Canada and Pine Tree Lines. A workmanlike job of reporting, done on the spot.

**EIGHT HOURS BEFORE RICHMOND.** By Virgil Carrington Jones. Henry Holt & Company, 1957. 180 Pages; Illustrated; Maps; Index; \$3.50. A dramatic account of Kilpatrick's ill-fated raid on Richmond in 1864, centered upon Col. Ulric Dahlgren, second in command, who was killed. By the author of *Ranger Mosby* and *Gray Ghosts and Rebel Raiders*.

**FIVE DOWN AND GLORY.** By Capt. Gene Gurney. G. P. Putnam's Sons, 1958. 302 Pages; Illustrated; \$5.75. Complete records on every U. S. ace, including Army Air Corps, Navy and Marine Corps Aviation, and USAF, as well as units like the Lafayette Escadrille, the Flying Tigers, and the Eagle Squadron.

**THE FRENCH NATION:** From Napoleon to Pétain. By D. W. Brogan. Harper &

Brothers, 1958. 328 Pages; Index; \$4.50. A famous historian and political observer presents a sweeping picture of the events and people in French political, military, artistic and social life during the last century and a quarter.

**INTERNATIONAL SECURITY:** The Military Aspect. Doubleday & Company, 1958. 64 Pages; \$3.50. The complete "Rockefeller Brothers Report" on the problems of U. S. defense.

**INTO THE SILK.** By Ian Mackersey. W. W. Norton & Company, 1958. 251 Pages; Illustrated; Index; \$3.95. A collection of famous emergency jumps by parachute, from the first by Harold Harris in 1922. A dramatic short history of the Caterpillar Club.

**THE MIND OF ALEXANDER HAMILTON.** Edited by Saul K. Padover. Harper & Brothers, 1957. 461 Pages; Index; \$6.50. Includes speeches in the Constitutional Conventions, the great economic papers, Hamilton's far-reaching analysis of the principles of free government, and his brilliant defenses of the Constitution, as well as maxims, mottoes, brief opinions, and comments on contemporaries.

**ONCE AROUND THE SUN.** By Ronald Fraser. The Macmillan Company, 1958. 160 Pages; Illustrated; \$3.95. The story of the International Geophysical Year, and what we hope to learn through the co-ordinated efforts of scientists from sixty-four countries.

**UNHOLY ALLIANCE.** By Gerald Freund. Harcourt, Brace & Company, 1957. 283 Pages; Index; \$6.00. Russian-German secret military and political relations from the Treaty of Brest-Litovsk to the Treaty of Berlin. Among other unpublished material, includes records of the German Foreign Ministry and private papers of Stresemann and Von Seeckt.

authored the two preceding volumes, *The Pusan Perimeter* and *The Inchon-Seoul Operation*.) Their method is the same for this volume: a careful collation of official records fleshed out with personal recollections (some 142 officers and men contributed 338 narratives, letters, and interviews). The result is a highly satisfactory, tightly written military history.

The bare facts of the campaign are these:

On 8 October 1950, the 1st Marine Division, the successful Inchon-Seoul operation behind it, loaded out from Inchon for Wonsan. After a seemingly interminable period at sea, caused by minesweep-

ing difficulties, the Division made an administrative landing at Wonsan, on the east coast, on 26 October. With no apparent enemy to fight except the shattered remnant of the North Korean Army, the Division was deployed widely. The 1st Battalion, 1st Marines, was sent to the south to Kojo; the 3d Battalion, 1st Marines, went inland to Majon-ni; the 5th and 7th Marine Regiments were ordered north to the vicinity of Hamhung.

On 2 November, the 7th Marines, moving to the relief of the 26th ROK Regiment at Sudong, northwest of Hamhung, made its first contact with the Chinese. The next three days of battle

eliminated the CCF 124th Division and a North Korean tank regiment as effective fighting units.

By 27 November the 5th and 7th had reached Yudam-ni, on the west side of strategically significant Chosin Reservoir. To their south, strung out along the all-important road that formed the main supply route, were the three battalions of the 1st Marines: 3d at Hagaru, 2d at Koto, 1st at Chinhung-ni.

The CCF struck in strength at Yudam-ni on 27 November. Hagaru was hit the next night. At the same time, in lesser numbers, the enemy began to probe the Marine defenses at Koto-ri.

On 30 November the Division was ordered by X Corps to begin withdrawing to the south. The breakout of the 5th and 7th Marines from Yudam-ni began on 1 December. By the 4th they had consolidated with the defenders of Hagaru-ri, fourteen road miles to the south. Two days later, the next long step—eleven miles to Koto-ri—was begun. Once at Koto, the next objectives were Funchilin Pass and a link-up with the battalion at Chinhung-ni, ten miles from Koto. By 10 December the Marines were at the foot of the pass. The remaining 43 miles to Hungnam were secured by the 3d Infantry Division. The way to the friendly sea was open.

During its breakout the Division had smashed through twelve Chinese divisions, at least eight of which were rendered militarily ineffective. There is no way of ever knowing what CCF total casualties were.

The Chinese wounded died of exposure; American casualties were evacuated by air. During the period 27 November through 10 December, 5,493 sick and wounded (including U. S. Army, ROKs and British marines) were evacuated from the Marine airstrips at Hagaru, Koto and Yudam-ni. On 5 December alone, 1,580 casualties were lifted out of Hagaru.

On 8 October, when it mounted out from Inchon, the Division's effective organic strength was 23,533. During the next ten weeks it suffered 604 KIA, 114 DOW, 192 MIA, 3,485 WIA, and 7,338 nonbattle casualties. Yet, on 15 December, when it sailed from Hungnam, effective strength was 14,462—eloquent testimony to the effectiveness of the medical service in returning casualties to duty.

Except for shoe-pacs (never intended for subzero temperatures) the Marines were well clothed and equipped for winter campaigning. The first few weeks of the fighting, before the CCF onslaught of 27 November, served as a breaking-in period for the rigors to come. In retrospect, Wonsan was a preview of Hungnam; and Kojo and Majon-ni, bitter as they seemed at the moment, were rehearsals for Yudam-ni, Hagaru-ri, and Koto-ri.

Within the Division itself (whatever

the headlines back home were saying) there was never any sense of entrapment. At rifleman level there was the firm belief that once the scattered elements of the Division were reassembled, the march to the north would be resumed. Even the division commander did not know until 9 December of the decision to evacuate Hungnam.

At regimental level, the Chinese acquitted themselves well. The much-publicized "human sea" tactics existed only in journalistic imagination. The only possibly valid analogy to a "human sea" was their tactic of attacking in successive waves of well-deployed formations. They attacked almost invariably at night, in an obvious effort to offset the Marines' great superiority in supporting weapons.

Terrible as the weather was (and it exacted a high cost in nonbattle casualties, mostly frostbite), it hurt the Chinese far more than it did the Marines. The padded Chinese coats and trousers were fairly effective, but their shoes, mostly flimsy canvas-and-rubber affairs, were woefully inadequate, and there seems to have been an almost total lack of gloves and mittens. Also, the Marines, road-bound though they were, had at least the occasional use of tentage and stoves. The CCF, on the other hand, had no shelter except the sparsely spaced houses of North Korean villages, protection against the weather which was largely denied them by systematic interdiction supplied by Marine air and artillery.

Then, too, despite their seemingly overwhelming numerical superiority, the Chinese had little capacity for sustained effort. They lacked organized transport. They were well supplied with small arms and light mortars, but had little artillery and no armor. Their communications were chaotic. They followed their preconceived plan doggedly but inflexibly. Coordination between major units was almost nonexistent. They had planned to divide and devour the 1st Marine Division. But instead of crushing the Marines under the weight of their numbers, it was the Chinese who were divided and ultimately defeated in detail.

## G2 on Cold War

**YEAR OF CRISIS: Communist Propaganda Activities in 1956**

Edited by Evron M. Kirkpatrick

The Macmillan Company, 1957

414 Pages; Illustrated; Index; \$5.50

Reviewed by

LT. COL. PAUL M. A. LINEBARGER.

Seven years ago Colonel William R. Kintner profiled the historical character of the Communist war against us, showing how much of communism is standard Western military doctrine adapted to the purposes of fanaticism and ideological struggle. His *The Front is Everywhere* is now admirably supplemented in year-by-

year reports by Professor Kirkpatrick, so that we have not only an estimate of the enemy and his capabilities in Kintner, but a good current G2 job on communism by Kirkpatrick.

Like a G2 report, *Year of Crisis* does not cover the whole of the cold war, but only what our antagonists are doing. Two-thirds of it are country studies, showing the Communist effort in the Far East, the Near East and South Asia, in Africa, Latin America, and Western Europe. An opening section gives a fair, clear, and reasonable statement—from the Free World point of view, of course—of what problems the Communists faced during 1956. A fifteen-page summary covers the entire nature of the enemy as he now stands. The rest of the book is given to topical and operational discussion of what the enemy has been doing in that period. Naturally enough, there is no anticipation of the period of crises forced upon us by a new bold spirit in Khrushchev's leadership—the material covered does not reach into 1957. Given the subject matter, and the Communist attempts to hide from one area what they are doing in another, this book is still very timely indeed. It supplements all the heavier and longer-range books on communism.

Indeed, this book belongs in every Army library, and should be at hand whenever communism is discussed formally or informally. Though it covers only the subject of propaganda, it provides enough hard data to show who the Communists are, how they recruit friends and dupes, and what makes them spread. *Year of Crisis* is a window in reality concerning a subject in which the distortions are almost as fantastic as the facts.

Thanks to Professor Kirkpatrick's survey, the reader sees that the Communist leaders do not have to worry too much about us Americans; if they disconnect all our allies from us, we will become easy pickings. Nor do these leaders have to worry about their own people; the Communist-controlled populations are broken to their stalls and routine police repression keeps quiet the small number who might make trouble. The real fight the Communists face at any time is along the margin, where communism stands a chance of winning, and it is precisely this margin which Kirkpatrick surveys.

He makes it plain that Communist propaganda is very far from the bushy-whiskered man-with-a-bomb on which most of us were brought up. The new versatility of communism spread the cause by all devices from ballet to machine tools. The media of Communist propaganda are the same as those of propaganda everywhere: print, telecommunications, persons, exhibits. The book would have been given more impact if it had paralleled the estimated budgets of the Communist propaganda machine

and those of USIA in comparable areas.

The author obviously relies a great deal on official sources, not enumerated in footnotes. No private scholar has the money, the travel time, or the energy to gather all this material in a single year, let alone write it up. Professor Kirkpatrick does a brilliant job of making the material clear, homogeneous, and readable, and his text is supplemented by many illustrations (usually well selected and only occasionally flat) and diagrams which show the Communist organizations and their output.

This is not only a valuable book, but an interesting one. Anyone with children in high school or college would be doing the school a favor in either giving it a copy or by appraising it of its existence. It would be easier and better to oppose our Communist antagonists if we knew what they were actually doing. And, of course, this book is a must for the officer stationed overseas: it provides an easy and painless way to find out what the Communist who shaved you or drove your taxi has read this morning. Kirkpatrick (Executive Secretary of the American Political Science Association) writes with a light, sure, interesting touch and keeps his book fast-paced throughout.

## Portrait of K

**KHRUSHCHEV OF THE UKRAINE**

By Victor Alexandrov

Philosophical Library, 1957

216 Pages; Index; \$4.75

Reviewed by

ROBERT N. WALKER, Ph.D., who is an Adjunct Professor at The American University, and Consultant to the Office of Special Warfare, Department of the Army.

The world sorely needs knowledge about Khrushchev, both as a person and as the most powerful figure in today's Russia. This biography suffers from the limited primary source material which characterizes biographical writing concerning Soviet "greats," and doubtless incorporates unwittingly some of the distortions and deliberate falsifications which the Party public relations machinery cleverly weaves around key Communists until they are liquidated (Beria), denigrated (Stalin), or banished to the hinterlands (Molotov, Malenkov, and Zhukov), whereupon their official biographical sketches are rewritten or expunged from the encyclopedias and biographical dictionaries published thereafter in the Soviet Union.

Khrushchev's early life parallels that of many Soviet leaders in that he rose from humble origins, knew at first-hand squalor, hunger and deprivation, and experienced corporal punishment and humiliation at the hands of the Tsarist police at an early and impressionable age (Freudian psychoanalytic theory could



easily relate this and other traumatic experiences in K's childhood to the man's behavior today).

However, unlike Stalin and many of the original Bolsheviks (most of whom Stalin shot), Khrushchev did not experience imprisonment or exile, and apparently has not developed the degree of psychopathic hostility or cruelty which Stalin showed. This is not to say that K is or has been "soft" or that he has not taken part in "purges"—he clearly has shared responsibility for decisions in which lives were "liquidated" and hundreds of thousands of persons have been uprooted from their homes and resettled in Siberian wastes on his orders. Middle life saw his meteoric rise in the Soviet hierarchy, and his recent years, as Stalin's successor, are fairly well known through the world's press.

Khrushchev is undoubtedly a man of great ability and astuteness in human relations. He is able to "unbend" and has the happy faculty of being unaffected and genuine. He is fond of calling himself a former swineherd and worker from Donetz. His capacity to handle alcoholic beverages is unbelievable (his utterances under the influence of alcohol have jeopardized his position, but apparently he is able to surmount all his mental lapses, even though his enemies within the Presidium must hope for and seek to contrive his downfall). On occasion, he can match wits with the best of the diplomats. His popularity with the masses is enormous, from all reports, and is based on the belief that he favors better living conditions, more food (K is an agricultural expert) and individual liberty (his anti-Stalin stand was very popular).

In view of the fact that the Soviet Government is apparently again in effect a one-man dictatorship (not an absolute dictatorship, but nearly so), this book, with its revelations about the kind of man who is at the top, is invaluable for an appreciation of the Soviet Union today, and the political group which runs it. Khrushchev is a man to watch, and above all, not to underrate.

## German Naval Actions

**DER SEEKRIEG: The German Navy's Story**  
By Vice Admiral Friedrich Ruge  
U. S. Naval Institute, 1957  
440 Pages; Illustrated; Maps; Index; \$5.00

**TWILIGHT OF THE SEA GODS**  
By Thaddeus V. Tuleja  
W. W. Norton & Company, 1958  
284 Pages; \$3.95

Reviewed by

COL. R. ERNEST DUPUY, USA, retired, distinguished Army historian, who has contributed many articles and reviews to this magazine.

From cover to cover, Admiral Ruge's book is a vigorous affirmation both of the value of sea power and of unity of com-

mand. Within the frame of a global treatment of World War II, he relates in detail the operations of the German Navy.

This is no tale of derring-do on the high seas, but a considered, impersonal study of, as the author writes, "the great effect of naval warfare on land campaigns and the influence of naval strategy on the major decisions of politics and war."

It is also the first authoritative account of the German Navy's activities during the period. The publisher is due the thanks of military folk for this valuable historical contribution from the erstwhile enemy side. Admiral Ruge's service in both World Wars and his present position as Chief of Naval Operations of the German Federal Republic eminently qualify him for this professional study.

Ruge relates with devastating clarity the "illuminating contrast" between Anglo-American unity of command and integration which controlled the land, sea and air forces of two great sea powers, and what he calls "the lack of coordinated planning between Germany, Italy and Japan." He adds, quite pertinently, that "it is an open question whether such close and mutually trustful cooperation would have been practicable as between the leaders of the three Axis powers."

Unity of command was almost nonexistent in the *Wehrmacht*. Hitler's OKW was but the mouthpiece for the Dictator's frenzied whims, frequently overriding the reasoned arguments of professionals. "The sea was an element completely foreign to the land-bound mentality of those at Supreme Headquarters."

Hitler, obsessed by Napoleonic dreams of conquering Russia, and thus taking out the last Continental power which might support Great Britain, "overlooked the fact that Napoleon had also gone to Egypt to force England to terms." This failure to grasp the strategic importance of Mediterranean control, Admiral Ruge argues, was but one of many major blunders.

*Der Seekrieg* belongs on the library shelves of everyone interested in modern war.

Tuleja's narrative, jam-packed with action, brings to life the men and ships discussed operationally by Admiral Ruge. The raiders and submariners who carried on Germany's *guerre de course*; the tragedies of *Graf Spee*, *Bismarck*, *Scharnhorst* and *Tirpitz*, and a score of others, heave dripping, spindrift-rimed, out of the past.

One can admire and respect these men without forgetting, as the author remarks, "Warsaw and Lidice, Dachau and Buchenwald, where murder was enshrined as a virtue." There was more truth than poetry in the German saying current during the war: "We are fighting with the Prussian Army, the Imperial Navy, and the Nazi Air Force."

Mr. Tuleja, professor of history at St. Peter's College in Jersey City, combines

his experience as a Navy officer in World War II and Korea with his pedagogical research, to produce a well-written running story of German ships and German sailors.

*Twilight of the Gods* is indeed a book of derring-do, and a fit complement to *Der Seekrieg*.

## Americans Overseas

**THE ART OF OVERSEASMANSHIP**  
Edited by Harlan Cleveland and Gerard J. Mangone  
Syracuse University Press, 1957  
150 Pages; \$3.00

Reviewed by

LT. GEN. WALTER L. WEIBLE, USA, Retired.

This book deals with a subject which has become increasingly important since World War II because of the magnitude, increased scope, and diversified nature of our overseas establishment. This is covered in the first part of the book.

The second part deals with desired qualifications and characteristics of persons who are to be employed overseas. This section will be helpful to those responsible for selecting individuals to accomplish specific tasks in particular areas.

"The Challenge to American Education," the final part, indicates what is necessary in the training and educational field to produce properly qualified Americans to fill the positions required in our overseas establishment.

The book represents an approach to a subject which should be of great interest to governmental and industrial officials. It will also be of assistance to those in religious or voluntary organizations which send Americans abroad to live and work in many areas of the world.

## Life in Dixie

**THE CONFEDERATE READER**  
Edited by Richard B. Harwell  
Longmans, Green & Company, 1957  
389 Pages; Illustrated; Index; \$7.50

Reviewed by

COL. R. ERNEST DUPUY.

It is no fault of its editor that this sampling of the Southland's printed and written word during the Civil War is depressing. Through Mr. Harwell's compilation we look into the minds of a segment of our population whose dominant minority seemed to live in a Disneyland of their own contriving and, perhaps naturally, resented the dissipation of their mirage.

Their resentment, of course, primarily took the shape of violent war, and with that this book deals only indirectly. Mr. Harwell, who is well qualified for the task, has painstakingly culled, from newspapers, magazines and books, from official documents, and from private correspondence, excerpts sufficient in scope and top-



ical content, to depict life and *mores* in the short-lived Confederate States.

One rubs elbow in these pages with the profiteer and the draft-dodger in Richmond—concomitants of war in a national capital—as well as with honorable men and women. One travels into the field to share, vicariously, the hard life of the fighting man.

From it all this reviewer gained the concept of a mass self-pity; the attitude that all the world was out of step but Johnny Reb; a somewhat boresome reiteration of how good was life in the Sunny South, where the slaves were always happy as, interminably, they sang their songs for the delectation of Dear Ole Massa. Since the majority of the men who fought so gallantly for the Stars and Bars never owned a slave in their lives, this theme is in the nature of whistling while passing a graveyard. The one clear-cut exception to this viewpoint is a dispatch of acid-penned William Howard Russell, war correspondent of the *London Times*. This is a series of vignettes of social, political and military life in Montgomery as Russell saw it in early 1861, reprinted in the *Mobile Advertiser & Register*.

The carefully selected cartoons and broadsides reproduced give a better yardstick with which to measure the Southern viewpoint and reactions to the war than do the words. The Confederate caricaturists were cynical and humorous, yet withal true to their cause.

## Poland Today

### POLAND

Edited by Oscar Halecki  
Frederick A. Praeger, Inc., 1957  
601 Pages; Index; \$10.00

### Reviewed by

DR. STEFAN T. POSSONY, Professor of International Politics at Georgetown University and author of several books on military subjects.

The unique status of Poland among the Soviet's satellites merits serious attention, both for the distinctive nature of its Communist regime and for an understanding of the role it might play in the future developments of world communism and East-West relations.

Despite a great deal of Soviet guile, the Poles have continued to evidence more powers of resistance than most other satellite peoples. This book was written by a distinguished group of scholars, many of them Polish exiles, under a program of the Mid-European Studies Center, a unit of the Free Europe Committee. Edited by a prominent historian, it presents a comprehensive survey of Poland under Communist rule, including a general history of the nation and introductory historical remarks to each separate topic. The major headings of economics, politics and culture contain twenty-one chapters

with a spate of statistical information and detailed descriptions of such matters as education, propaganda, police and army, religion, arts, and government, to mention a few. An appendix provides biographical data on Poland's Communist leaders, an outline of its history since World War II, its treaties, and a brief chapter on recent events through early 1957.

Despite numerous obstacles including limited space, and despite the difficulty of obtaining and interpreting Communist data and politically designed statistics, the entire volume is a telling condemnation of the Communist system. True, there have been a few isolated improvements in the economic sphere and concessions such as the extension of state welfare services to certain workers. Yet the overall picture is one of grim repression, mismanagement, inefficiency, misery and terror. Overemphasis on production of capital goods has imposed its dismal corollary of drastically reduced living standards and general economic chaos with waste of industrial, agricultural, and human resources. Even medical care is subordinated to the cause of increased industrialization. Medical standards are lowered by poor compensation and inadequate educational facilities. The crushing and time-wasting process of political indoctrination embraces even doctors, along with soldiers, artists, workers, scientists and all other citizens. The educational system is directed toward the end of orthodox communism which also is the sole and stultifying *raison d'être* of the arts. Soviet propaganda seeks to exploit the potentially dangerous patriotism through reinterpreting history and through emphasis upon events favorable to the USSR and to Russification. Attempts are made to sever the Church from Rome and enlist its support of the regime. Since the Constitution and the various steps toward an alleged democratic system are complete frauds, there hovers over all Polish life the pervasive specter of the secret police which still functions above and beyond all law and spreads terror and personal insecurity everywhere.

The book was completed when there appeared to be a thaw in the rigid system which might have portended a genuine change for the better. Subsequent events have dashed most hopes of this type. Although Poland still is distinguished by a relative measure of independence from the Kremlin, the new regime has been rescinding much of the latitude granted during the brief thaw period.

Communism has failed to alter the fiber of the people. To the Kremlin, stubborn resistance to communism and Russification makes Poland an undependable "ally" and a bad example for other satellites. The long-run effects of this situation on Kremlin planners as well as on the West are not yet clear. Perhaps it is

well that the authors saw fit not to project their findings into proposals or predictions for the future, for this would have involved debatable and inconclusive issues far overreaching the limits of the scientific method. The book's usefulness lies in its objective and analytical presentation of facts. The authors must be congratulated on their highly valuable contribution to a subject which will remain crucially important—and painful—for many years to come.

## Events of 1955

### THE UNITED STATES IN WORLD AFFAIRS, 1955

By Hollis W. Barber  
Harper & Brothers  
346 Pages; Illustrated; Index; \$6.00

### Reviewed by

ROBERT N. WALKER.

With this volume the Council on Foreign Relations carries forward its annual survey of the course of American foreign policy. The nearly simultaneous publication of the volumes for 1955 and 1956 now brings the series up to date from the first volume of 1945-47, and future issues will appear in the spring of each following year. The present book, like its predecessors, reviews the events of the year in the light of historical fact rather than editorial bias.

This book is of signal value to students of America's role in foreign affairs. Pertinent facts are recorded accurately and succinctly, and a balanced appraisal of the significance of events is presented with a minimum of personal opinion. Most readers are not in a position to analyze, to interpret, and to judge unfolding events on the kaleidoscopic global scene; the average reader is necessarily limited in access to the facts. In addition, time limitations and restrictions of background and experience (unless one pretends to universal knowledge) make imperative reliance on such a volume as this.

Here in retrospect are the events of 1955 which in 1957 have been carried to their partial or complete fulfillment. Hindsight is always better than foresight. The daily deviations and adjustments of foreign policy which have paid off or have been found to be counter-productive may be identified, and the present and future courses of American foreign policy charted more "by the stars" than by expediency and improvisation for short-range goals. The issues which perplexed statesmen in 1955 are largely unsolved today: the Aswan Dam project, open-skies disarmament, the Middle East impasse, and the growth of Soviet influence in Afghanistan, Syria, Egypt, and Communist China.

This volume, on the "Year of Relaxation of Tensions," will help us understand the background of our foreign problems; with such understanding, it is to be hoped, that greater wisdom will guide present and future decisions.



# ASSOCIATION OF THE U. S. ARMY

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The Association of the U. S. Army shall be an organization wherein all who are in accord with its objectives may join in the exchange of ideas and information on military matters, and in fostering, supporting, and advocating the legitimate and proper role of the Army of the United States and of all its elements, branches, and components in providing for and assuring the Nation's military security.

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vided for by Section 55c of the National Defense Act as amended.

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**Sustaining Membership.** Sustaining membership shall be open to such industrial, commercial, business, professional, technical and veteran firms, corporations, organizations or societies that wish to support the aims and purposes of the Association, subject to specific approval by the Council of Trustees.

# AUSA REGIONAL ACTIVITIES

## CHAPTERS

**ALBUQUERQUE CHAPTER**—*Secretary:* Capt. Shirley J. Minge, USAR, USAR Armory, 400 Wyoming Blvd., N.E., Albuquerque, New Mexico. *President:* Lt. Col. Denton E. Sprague; *First Vice President:* Lt. Col. James M. Keating, USAR-Rtd.; *Second Vice President:* Lt. Col. Peter Brooks, USAR; *Treasurer:* 1st Lt. Albert T. Ussery, USAR.

Above officers installed at 15 January meeting, which was addressed by Lt. Gen. William S. Lawton, Army Comptroller and former member of Executive Council, AUSA. General Lawton's subject was "Financial Management in the Army."

**BALTIMORE CHAPTER**—Liberty Heights USARC, 3906 Liberty Heights Ave., Baltimore 7, Md. *President:* Mr. William A. Graham; *First Vice President:* Mr. Edward Vinnicombe; *Second Vice President:* Mr. Jack A. Clarke; *Secretary:* Mr. James W. Allison, III; *Treasurer:* Lt. Col. Charles A. Noon, Jr.

Above officers installed at meeting 15 January. Activities of the meeting included a tour of the U. S. Army Intelligence School, cocktails and buffet at Fort Holabird Officers' open mess, and music by the Fort Meade Choral Group. A scheduled review was rained out.

**COLUMBUS-PHENIX CITY-FORT BENNING CHAPTER**—*President:* Mr. J. W. Woodruff, Jr.; *First Vice President:* Mr. R. Ashworth; *Second Vice President:* Mr. Henry B. Pease; *Secretary-Treasurer:* Col. J. L. Osgard; *Asst. Secretary-Treasurer:* Lt. Col. S. H. Abernathy.

**FORT LEONARD WOOD CHAPTER**—*Secretary:* Capt. James C. Kesterson, Building 401, Fort Leonard Wood, Missouri. *President:* Mr. Dru Pippin; *First Vice President:* Mr. Dale Bradford; *Second Vice President:* Mr. Rudy Weber; *Treasurer:* Lt. Richard J. Kelloff; *Asst. Secretary-Treasurer:* SFC August H. Meyer.

Hon. Dewey Short, Assistant Secretary of the Army, spoke to more than 1,000 persons at 24 January meeting on the subject of Mutual Security. About twenty mayors of surrounding communities and thirty newspapermen, radio and TV representatives were in the audience. A buffet dinner was served. Above officers elected during meeting.

**NEW ORLEANS CHAPTER**—4400 Daupine St., New Orleans 40, La. *President:* Mr. Wallace M. Davis; *First Vice President:* Col. Donald E. MacDonald; *Second Vice President:* Brig. Gen. Robert V. Maraist,

USA-Rtd.; *Third Vice President:* Mr. Jonas C. Spork; *Secretary:* Maj. Louis Robillia, Jr., USAR; *Treasurer:* Mr. Newton D. McLean.

Board of Directors meeting 13 December passed resolution offering Chapter's "wholehearted and enthusiastic support" of AUSA's Objectives passed at 1957 Annual Meeting, and immediately sent copies of the Resolution and a letter reinforcing it to all members of the Louisiana Congressional delegation.

**NEWTON D. BAKER CHAPTER**—*Secretary:* Col. Richard L. Gillespie, USAR, Veterans Admin. Regional Office, Cuyahoga Building, Cleveland 14, Ohio. *President:* Hon. Robert H. Jamison; *First Vice President:* Gen. William F. Hoge, USA-Rtd.; *Second Vice President:* Brig. Gen. George R. Schmucker, USAR-Rtd.; *Treasurer:* Lt. Col. Henry E. Zachman, USAR.

Chapter, through its Secretary but with the cooperation of enthusiastic members, has been waging a successful campaign to get news favorable to the Army in local news media, and to gain the support of other patriotic organizations for Association objectives.

**NEW YORK CHAPTER**—*President:* Lt. Colonel Charles I. Katz, USAR, 250 West 57th Street, New York 19, New York; *First Vice President:* Col. Arthur D. Hirt, USAR; *Second Vice President:* Lt. Col. Pelham St. George Bissell, III, USAR; *Secretary:* Major Emilie L. Berkley, USAR; *Treasurer:* Col. Lloyd W. Stearns, USAR.

On 28 January mailed all members reproductions of AUSA's Objectives and Fact Sheets, with plea to members to get in touch with their Senators and Representatives to urge actions in consonance with the Objectives.

**WASHINGTON STATE CHAPTER NO. 1**—*Secretary:* Lt. Col. John A. Spencer, Fort Lewis Exchange, Fort Lewis, Washington. *President:* Mr. Harry L. Minor; *First Vice President:* Mr. Fred C. Osmer; *Second Vice President:* Mr. Ray Clark; *Treasurer:* Mr. R. Nat Hatcher.

Above officers installed at meeting 19 January, which was addressed by Mr. Reno Odlin, President of Tacoma's Puget Sound National Bank. Members present agreed by vote that the President was to write each member of the Washington State delegation in Congress outlining the objectives and resolutions of both National AUSA and the Chapter,



FRANKFURT, GERMANY. Maj. Gen. Paul D. Adams, CG, Northern Area Command, addresses the organization meeting of Frankfurt Chapter. Others are (left to right): Capt. Robert M. Dwinell, Secretary; Col. Harry W. Gorman, Vice President; Lt. Gen. F. W. Farrell, V Corps CG, Honorary President; Col. Melvin M. Kerman, President.



FORT BENNING, GA. New officers of Columbus-Phenix City-Fort Benning Chapter elected at the meeting held in Oran Mess, 23 January. Left to right: Henry B. Pease, Second Vice President; Lt. Col. S. H. Abernathy, Assistant Secretary-Treasurer; J. W. Woodruff, President; Col. J. L. Osgard, Secretary-Treasurer; R. Ashworth, First Vice President.



**FORT HOLABIRD, MD.** Head table at the Baltimore Chapter's business-meeting dinner on 15 January. Left to right: Col. Frank M. Hosterman, Holabird Chief of Staff; Jack A. Clarke, Second Vice President; Maj. Gen. Richard G. Prather, Holabird CG; William A. Graham, new President; Col. J. L. Keefe of XXI Corps (Reserve); Col. Thomas M. Lerner, Assistant Commandant, USA Intelligence School; Charles A. Noon, Jr., Treasurer.



**ALBUQUERQUE, N. M.** Speaker at the 15 January meeting of Albuquerque Chapter was Lt. Gen. William S. Lawson, Army Comptroller (center). Lt. Col. Denton E. Sprague, USAR, is at left, Col. Benjamin Rogers, Past President, at right.



**FORT LEONARD WOOD, MO.** Hon. Dewey Short, Assistant Secretary of the Army, attends a meeting of Fort Wood Chapter which discussed problems of mutual security and the fate of Fort Leonard Wood, which he said would not be closed. Others are Maj. Gen. Thomas A. Lane, Fort Wood CG (left), and Dru Pippin, newly elected President of Fort Wood Chapter (right).

and that each member be urged to write to congressmen and other leaders of government. Members were supplied with mimeographed material to guide them in writing these letters. Chapter has been receiving good publicity in local news media.

**WILLIAM PENN CHAPTER**—Bridge and Tacony Streets, Philadelphia 37, Pa. *President:* Mr. C. C. Fawcett; *First Vice President:* Mr. George

A. Miller, Jr.; *Second Vice President:* Mr. Kenneth E. Yocum; *Secretary:* Mr. Robert McCullogh; *Treasurer:* Miss Hilda Price.

**WOLTERS CHAPTER**—c/o Information Section, Camp Wolters, Mineral Wells, Texas. *President:* Mr. Tom Creighton; *First Vice President:* Mr. Edgar Bowden; *Second Vice President:* Dr. H. A. Zappe; *Third Vice President:* Col. Chester H. Meek; *Corresponding Secretary-Treasurer:* Major John R. Burns; *Recording Secretary-Treasurer:* Mr. Jess Everett.

Chapter is instituting an Awards Program to recognize persons and organizations who contribute to the over-all good of the Army and Camp Wolters. Plans were made at January meeting to broaden base of membership.

## ROTC COMPANIES

**DAKOTA COMPANY**, North Dakota Agricultural College, Fargo, N. D.—*Captain:* Cadet Arnold Ellingson; *First Lieutenant:* Cadet Neal R. Bjornson; *Second Lieutenant:* Cadet Melvin G. Werth; *Social Chairman:* Cadet Curtis L. Stromstad; *First Sergeant:* Cadet W. Dale Ruff.

Speaker at 16 January meeting was SFC Simpson, who spoke on his experiences during a recent tour of duty in Iran.

**EDMUND R. WALKER COMPANY**, University of Connecticut, Storrs, Conn.—*Captain:* Cadet Francis E. Dion, Jr.; *First Lieutenant:* Cadet Liudas Bajorinas; *Second Lieutenant:* Cadet Howard M. Belinsky; *First Sergeant:* Cadet Edward H. Soderberg.

Following business meeting 9 January, Major John Doody spoke on "The Personal Life of an Officer Overseas."

**GORDON COMPANY**, Gordon Military College, Barnesville, Georgia—*Captain:* Cadet William A. McKoy; *First Lieutenant:* Cadet Peter L. Banks; *Second Lieutenant:* Cadet Ward M. Chewing, Jr.; *First Sergeant:* Cadet Max E. Sappington.

First formal meeting of the Company was held 25 November, at Gordon Military College Armory. Maj. Henry E. Wisebram, USAR, spoke on the Reserve program, and was followed by Lt. Col. Hatter, PMST, who spoke on the place of the AUSA Company at Gordon.

**LOYOLA COLLEGE COMPANY**, Loyola College, Baltimore 10, Md.—*Captain:* Cadet Gordon Lee; *First Lieutenant:* Cadet Leo Romeo; *Second Lieutenant:* Cadet Donald Rohr; *First Sergeant:* Cadet John Cole.

January meeting featured talk by Cadet Leo V. Romeo, who spoke on the subject of AUSA ROTC organization and its value on the campus.

**THE LOYOLA UNIVERSITY COMPANY**, Loyola University, 6525 Sheridan Road, Chicago 26, Illinois—*Captain:* Cadet Thomas Nolan; *First Lieutenant:* Cadet Eugene Crosant; *Second Lieutenants:* Cadets Gerald Pierce and Harold Murphy; *First Sergeant:* Cadet Paul M. Maffia.

Company has obtained a room for its exclusive use; it will be employed both as a meeting place and as a day room for AUSA members. Meeting 5 November featured film, "Weapons of the Anti-aircraft."

**PENNSYLVANIA STATE UNIVERSITY COMPANY**, The Pennsylvania State University, University Park, Pa.—*Captain:* Cadet Gordon K. Pollard; *First Lieutenant:* Cadet Keith F. Vansant; *Second Lieutenant:* Cadet Albert J. Chukusky; *First Sergeant:* Cadet Frank H. Morris.

Meeting 7 January initiated twenty new members; four absent pledges will be initiated next meeting. A film on guided missiles completed the program; refreshments were served.

**WEST TEXAS STATE COMPANY**, West Texas State College, Canyon, Tex.—*Captain:* Cadet Gaylon L. Johnson; *First Lieutenant:* Cadet Jackie J. Alexander; *Second Lieutenant:* Cadet Ralph D. Gowen; *First Sergeant:* Cadet Sam W. Hodges, Jr.

A film, *The Soviet Soldier*, was shown at 19 December meeting.



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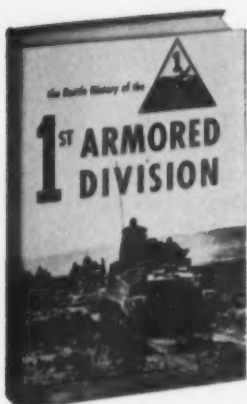
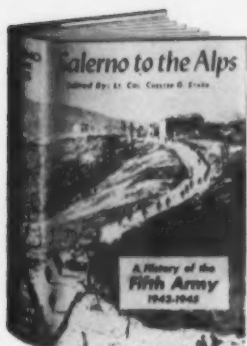
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- 5 — Establishment of provisions to protect active and reserve personnel against arbitrary force-out and other breaking of faith with their unwritten service contracts subject only to faithful and competent service.
- 6 — Upward revision of the weight and range limitations on Army aircraft and missiles.
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